



Wastewater Treatment and Collection System

Washago 2023 Annual Report



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Executive Summary

Washago utilizes a dual-cell facultative lagoon system for sewage treatment. The effluent quality is monitored before, during and after treatment to verify compliance with the Ministry of the Environment, Conservation and Parks (MECP) Certificate of Approval (CofA). Only Cell No. 1 is equipped to discharge into the Green River. Cell No. 2 is used for the retention of incoming sewage while Cell No. 1 is for discharging. River samples are taken before and during discharge to monitor the effects of the discharge on water quality.

Cell No. 1 was discharged in the spring and the fall of 2023. The mean concentrations and total loadings of all parameters were below their respective C of A compliance limits.

There was no impact on the quality of the Green River due to the spring and fall discharges. The total volume of effluent discharged was 59,825 cubic metres (m³) approximately 73 per cent of the facility's operating capacity of 81,900 m³/year.

No bypass occurred during the 2023 operating year.

Introduction

Washago is situated approximately 20 kilometres (km) north of Orillia near the intersection of Highway 11 and County Road 169. The lagoon is located approximately 1.5 km northwest of the village core. Treated effluent from the facility is discharged to the Green River.

Facility Technical Information

The lagoon is operated under C of A No. 3-1081-83-006. A copy of the C of A is enclosed in Appendix A.

The lagoon consists of two cells operated in series. Sewage is pumped from the main pumping station in Washago into Cell No. 2. Sewage then flows into Cell No. 1 through a valved transfer pipe located in the berm separating the cells.



Storage and treatment of raw sewage are provided in Cell No. 2 during the treatment of Cell No.1. Cell No. 1 discharges to the Green River via an outfall that runs through the adjacent wetland. According to the C of A, the seasonal operating capacity of the facility is 40,950 m³ based on an average day flow of 227.5 m³/day over 180 days. The configuration of the lagoon and outfall easement are shown on Figure 1.



Figure 1: Sewage Treatment Facility Site Plan



Performance Criteria

The C of A objective and compliance limits for effluent quality and the waste loading limits are summarized in Table 1.

Table 1	Performance	Criteria
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Parameter	Objective Limits Concentration (mg/L)	Objective Limits Semi-Annual Loading (kg)	Compliance Limits Concentration (mg/L)	Compliance Limits Semi- Annual
BOD ₅	15	614	25	1024
TSS	20	815	25	1024
Pt	1	41	1	41

Monitoring and Treatment Protocol

Raw sewage samples were collected from Washago Sewage Pumping Station #1 monthly and analyzed for TSS, BOD5, Pt and TKN. Results of the analysis are shown on the Municipality Monitoring Program Mechanical Plants forms enclosed in Appendix B and summarized in Table 2.



Raw Sewage Monitoring

Table 2: Raw Sewage Monitoring Results

Date	Date	BOD5 (mg/L)	Pt	TKN (mg/L)
January 10, 2023	155	170	2.30	23.4
February 8, 2023	279	266	5.45	45.2
March 7, 2023	176	215	4.68	39.7
April 4, 2023	185	26	0.78	8.8
May 11, 2023	128	172	4.92	38.5
June 8, 2023	227	238	3.99	40.0
July 12, 2023	120	123	2.73	30.0
August 9, 2023	249	329	3.75	31.6
September 6, 2023	191	163	4.08	39.8
October 11, 2023	73	165	2.76	23.2
November 7, 2023	139	98	2.38	22.2
December 5, 2023	177	140	2.02	17.3

Sewage Flow Monitoring

The volume of sewage pumped from Washago Sewage Pumping Station #1 to the lagoon is estimated monthly by multiplying the elapsed run time of each pump in the station by the capacity of the pump. Draw down tests are completed by Township staff in the spring and the fall to confirm pump capacity. Draw down test



calculations are enclosed in Appendix C. Raw sewage flows are shown on the Municipality Monitoring Program Mechanical Plants forms enclosed in Appendix B.

Based on the influent volumes reported in the Municipal Utility Monitoring Report, the total estimated volume of sewage transferred to the lagoon during the October 18, 2022, to April 18, 2023, winter operating season was 21,929 m³. The total estimated volume of sewage transferred to the lagoon during the April 18, 2023 to October 23, 2023 summer operating season was 24,018 m³. The total volume of sewage transferred to the lagoon during the total volume of sewage transferred to the lagoon during the X, 2023 to October 23, 2023 summer operating season was 24,018 m³. The total volume of sewage transferred to the lagoon during the X, 2023 to October 23, 2023 summer operating season was 24,018 m³. The total volume of sewage transferred to the lagoon during the winter and summer operating seasons was 45,947 m³. Sewage flows are summarized in Table 3 and 4.

Date	Volume (m³)
October 18-31, 2022	806
November 2022	2,780
December 2022	3,456
January 2023	4,819
February 2023	2,827
March 2023	3,245
April 1-18, 2023	3,996
Total	21,929

Table 2: Sewage Flow to Lagoon Winter Operating Season



Date	Volume (m³)
April 18-30, 2023	2,664
May 2023	2,664
June 2023	3,330
July 2023	4,820
August 2023	4,820
September 2023	3,208
October 1-23, 2023	3,058
Total	2,668

Table 3: Sewage Flow to Lagoon Summer Operating Season

Treatment and Sampling Protocol

Final treatment of the sewage begins by isolating Cell No. 1 for a period of approximately 30 days. depending on operational constraints. During this period, all sewage received at the lagoon is retained in Cell No. 2. To ensure adequate storage volume in Cell No. 2 during the treatment period, the operator transfers as much of the volume of Cell No. 2 to Cell No. 1 by pump.

During the treatment period, composite samples are collected to determine the quality of the effluent. If the effluent quality is below the C of A compliance limits, the cell is discharged without further treatment. If treatment is required, it is accomplished by batch chemical treatment with liquid aluminum sulphate (alum). Alum is added to the lagoon contents to initiate precipitation of the suspended matter. Although the treatment is essential to reduce P_t levels, a significant reduction of BOD₅ and TSS is also achieved. The addition of liquid alum is carried out using the procedure outlined and recommended by the MECP in a technical report issued January 16, 1974.



Pre- and post-treatment samples are obtained from representative locations in Cell No. 1 and analyzed for BOD₅, P_t, TSS, pH, TA, TKN and Alkalinity. Discharge samples are collected from the downstream end of the Cell No. 1 discharge pipe and analyzed for the same parameters.

Grab samples are obtained from the Green River, upstream and downstream of the lagoon discharge point to monitor impacts of the discharge on the river. Samples are analyzed for BOD₅, P_t, TSS, pH, TA, TKN and Alkalinity.

Laboratory analysis reports for effluent and river samples are enclosed in Appendix D.

Treatment / Discharge

Spring Discharge

Three pre-discharge samples were taken from Cell No.1 for the spring discharge and three more during discharge to confirm effluent quality. The concentrations of Pt, TSS and BOD5 reported in the pre-discharge samples were below the compliance limit. Based on the results of the pre-discharge samples, the discharge of Cell No. 1 commenced without batch chemical treatment. Results of the analysis are outlined in Table 5.



	Date	TSS (mg/L)	BOD₅ (mg/L	P _t (mg/L)
Sample 1	April 27, 2023	8	7	0.05
Sample 2	May 1, 2023	4	12	0.06
Sample 3	May 4, 2023	2	4	0.12
Sample 4	May 11, 2023	2	4	0.19
C of A Objective		20	15	1
C of A Compliance		25	25	1

Table 4: Pre-Discharge Sampling – Spring Discharge

The spring discharge commenced on May 29, 2023. The total volume of effluent discharged was 22,931 m³ at a mean discharge rate of 5460 m³/day. During the discharge, the mean concentrations of TSS, BOD₅ and P_t were below compliance limits. A summary of the effluent quality and waste loadings is illustrated in Table 6.

Table 5: Effluent Discharge Summary – Spring Discharge

	Date	TSS (mg/L)	BOD₅ (mg/L)	P _t (mg/L)
Sample 1	April 27, 2023	8	7	0.05
Sample 2	May 1, 2023	4	12	0.06
Sample 3	May 4, 2023	2	4	0.12
Sample 4	May 11, 2023	2	4	0.19
C of A Objective		20	15	1
C of A Compliance		25	25	1
Effluent Waste Loading		151	282	4.12



Samples were obtained from the Green River, upstream and downstream of the lagoon discharge point, at the start, middle and end of the discharge. Results of the analysis are illustrated in Table 7. Analysis of the receiving stream samples showed no impact on the Green River due to the discharge of Cell No.1.

	Date	TSS (mg/L)	BOD₅ (mg/L)	P _t (mg/L)
Start Discharge	May 29, 2023			
Upstream		2	< 4	< 3
Downstream		2	5	< 3
Mid Discharge	May 31, 2023			
Upstream		2	< 4	0.04
Downstream		2	< 4	< 3
End Discharge	June 2, 2023			
Upstream		2	6	0.03
Downstream		2	< 4	< 3

Table 6: Green River Monitoring – Spring Discharge

Fall Discharge

Three pre-discharge samples were taken from Cell No. 1 to confirm effluent quality prior to the fall discharge. All parameters were below the C of A compliance limits. Based on these results, the discharge of Cell No. 1 commenced without batch chemical treatment. Results of the analysis are illustrated in Table 8.



Table 7: Pre-Discharge Sampling – Fall Discharge

	Date	TSS (mg/L)	BOD ₅ (mg/L	P _t (mg/L)
Sample 1	November 6, 2023	16	17	0.09
Sample 2	November 13, 2023	17	20	0.08
Sample 3	November 20, 2023	6	16	0.04
C of A Objective		20	15	1
C of A Compliance		25	25	1

The discharge of Cell No. 1 commenced December 4, 2023. The total volume of effluent discharged was 36,894 m³ at a mean discharge rate of 4,611 m³/day.

During the discharge, the mean concentrations of TSS, BOD5 and Pt were below compliance limits. A summary of the effluent quality and waste loadings is illustrated in Table 9.

Table 9: Effluent Discharge Summary – Fall Discharge

	Date	TSS (mg/L)	BOD ₅ (mg/L)	P _t (mg/L)
Start Discharge	Dec 4, 2023	28	32	0.05
Mid Discharge	Dec 7, 2023	16	19	0.04
End Discharge	Dec 11, 2023	19	27	0.04
Mean Concentration		21	26	0.04
C of A Objective		20	15	1
C of A Compliance		25	25	1
Effluent Waste loading		774	9595	1.47



Samples were obtained from the Green River, upstream and downstream of the lagoon discharge point, at the start, middle and end of the

discharge. Analysis of the receiving stream samples showed no impact on the Green River due to the discharge of Cell No. 1. The results of the analysis are illustrated in Table 10.

	Date	TSS (mg/L)	BOD₅ (mg/L)	P _t (mg/L)
Start Discharge	Dec. 4, 2023			
Upstream		< 2	< 4	< 3
Downstream		< 2	< 4	< 3
Mid Discharge	Dec. 7, 2023			
Upstream		< 2	< 4	< 3
Downstream		2	< 4	< 3
End Discharge	Dec. 11, 2023			
Upstream		2	< 4	< 3
Downstream		2	< 4	< 3

Table 8: Green River Monitoring – Fall Discharge

Efforts and Results in Meeting Effluent Objectives of Certificate of Approval

The lagoon is operated and maintained such that all effluent quality objectives are strived for. Objectives and limits are based on an average. There was one limit



exceedance during the 2022 – 2023 discharges, which was BOD₅ and one objective exceedance for TSS during the fall discharge. Refer to Table 8: Effluent Discharge Summary – Fall Discharge.

2023 Operating Year Summary

The volumes of influent received, and effluent discharged from the lagoon during the 2023 operating year are summarized in Table 11.

 Table 9: Influent and Discharge Volume Summary

Total Influent Volume Sewage	45,947 m³
Total Effluent Discharged	59,825 m³
Precipitation Value	13,878 m³

The waste loadings during the 2023 operating year are summarized in Table 12.

Table 10: Waste Loading Summary

	Spring 2023 <i>(kg)</i>	Fall 2023 (kg)	Total Loading <i>(kg)</i>
TSS	151	774	925
BOD ₅	282	959	1241
Pt	4.12	1.47	5.59



Conclusions and Recommendations

The performance of the Washago Sewage Treatment Works during the 2023 operating year had one objective and one limit exceedance. To ensure that the seasonal operating capacity of the lagoon is not exceeded, the spring and fall discharges should continue to be scheduled as early in the spring and as late in the fall as practical to reduce the length of the winter operating season, when the volume of precipitation accumulation is the greatest and the rate of evaporation is the lowest.



Appendix A Certificate of Approval

Washago Lagoon Annual Summary Report

Ministry of the Environment Certificate No. 3-0800-82-006

Certificate of Approval (Sewage)

SANITARY SEWERS

ntario

DEC 1

XX

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-

the construction of sanitary sewerage works facilities to service the Community of Washago as follows:

STREET	FROM	<u>T0</u>
Quetton Street	Approx. 218 m South of Leith Street	Approx. 29 m North of Leith Street
Quetton Street	Orillia Street (Highway No. 69)	Hamilton Street
Muskoka Street	Approx. 235 m South of Rama Street	Approx. 303 m North of Ramsay Street
Mill Lane	Hamilton Street	Albany Street
Easement	Mill Lane	Approx. 129 m North of Edgar Street
Ramsay Street	Muskoka Street	Approx. 80 m West of Muskoka Street
Edgar Street	Muskoka Street	Approx. 75 m West of Muskoka Street
Edgar Street	Approx. 60 m East of Mill Lane (Easement)	Approx. 100 m East of Mill Lane (Easement)
Albany Street	Muskoka Street	Approx. 75 m West of Muskoka Street
Albany Street	Mill Lane	Approx. 34 m East of Mill Lane (Easement)
		2

Now therefore this is to certify that after due enquiry the said proposed works have been approved

under Section 24 of the Ontario Water Resources Act.

DATED AT	TTORONTO this	8th	day of	Decemb
Attn:-Mr. J.E cc:-Mr. G.	B. Mather, Clerk, Mierzynski, MOE	Twp. of Orill C. Reg. Dir.	ia	
-Reid &	Assoc. Ltd.			
-Mr. W.A	A.S. Marshall, Pr	oject Engrg.		
-Mr. N.	Embree, MOE Barr	ie Office		NALI
-Mr. J.	Toth, Design & E	quipment	10	17 11
-Mr. W.	Brink, Design &	Equipment	C	10000
ec				
105 0704 0/0				

ber

Director

Ministry of the Environment

C____ificate No. 3-0800-82-006 (Continued)

Certificate of Approval (Sewage)

- 2 -

Whereas

Ontario

of

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-

SANITARY SEWERS (Cont	t'd)	
STREET	FROM	<u>T0</u>
Orillia Street	Approx. 72 m North of Quetton Street	Muskoka Street
Rama Street	Muskoka Street	Approx. 51 m East of Muskoka Street
Easement	Muskoka Street	Quetton Street
FORCEMAINS		
Muskoka Street	Approx. 303 m North of Ramsay Street (Proposed Sewage Pumping Station No.3)	Ramsay Street
Albany Street	Approx. 103 m East of Muskoka Street (Proposed Sewage Pumping Station No.2)	Muskoka Street
Muskoka Street	Approx. 235 m South of Orillia Street (Proposed Sewage Pumping Station No.1)	Orillia Street
Orillia Street	Muskoka Street	Quetton Street
Quetton Street	Orillia Street	Hamilton Street (Easement)
Easement	Hamilton Street	Approx. 1700 m North and N.W. of Hamilton Street (Proposed Waste Stabilization Pond) 3

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this

8th

day of

December

Os m Director

Certificate No. 3-0800-82-006 (Continued)

Ministry of the Environment

Certificate of Approval (Sewage)

- 3 -

Whereas

Ontario

of

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-

including building sewers from the main sewer to the street line, as shown on the drawing or as may be approved by the operating authority in the future together with three (3) sewage pumping stations as follows:

<u>SEWAGE PUMPING STATION NO.1</u>: to be located on the east side of Muskoka Street approximately 235 m south of Orillia Street and consisting of the construction of a submersible type raw sewage pumping station c/w the installation of two (2) 14.4 L/s @ 15.6 m T.D.H. submersible raw sewage pumps; an emergency forcemain by-pass; an emergency overflow to the Severn River and all necessary appurtenances and controls;

SEWAGE PUMPING STATION NO.2: to be located on the south side of Albany Street approximately 103 m east of Muskoka Street and consisting of a submersible type raw sewage pumping station c/w the installation of two (2) 6.28 L/s @ 8.3 m T.D.H. submersible raw sewage pumps; an emergency forcemain by-pass; an emergency overflow to the Severn River and all necessary appurtenances and controls;

<u>SEWAGE PUMPING STATION NO.3</u>: to be located on the west side of Muskoka Street approximately 303 m north of Ramsay Street and consisting of a submersible type raw sewage pumping station c/w the installation of two (2) 6.76 L/s @ 9.0 m T.D.H. submersible raw sewage pumps; an emergency forcemain by-pass; an emergency overflow sewer to an adjacent watercourse and all necessary appurtenances and controls,

all in accordance with the final plans and specifications prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including land charges, engineering and contingencies, of NINE HUNDRED FORTY FOUR THOUSAND DOLLARS (\$944,000.00).



Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this

/ec

8th

day of

December

112 Mentue

of the Environment Certificate No. .7-0214-83-006.....

21

Certificate of Approval (Water)

Whereas TOWNSHIP OF ORILLIA

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has applied in accordance with Section 23 of the Ontario Water Resources Act for approval of:-

the construction of watermains as follows:

STREET	FROM	TO
Quetton Street	Approx. 48 m South of Orillia Street	Orillia Street
Orillia Street	Quetton Street	Approx. 50 m East of Quetton Street (CNR Right-of-Way)
C.N.R. Right-of-Way	Orillia Street	Hamilton Street

including stub watermains and service connections from the distribution main to the street line, as shown on the drawings or as may be approved by the operating authority in the future, all in accordance with the final plans and specifications prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of SEVENTEEN THOUSAND DOLLARS (\$17,000.00).

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Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 23 of the Ontario Water Resources Act.

	DATED AT TORONTO this Attn:-Mr. J.B. Mather, Clerk, Tw	29th day of Orillia	April	19 83
	cc:≠Mr. J. Ferguson, Road Supt			
	-Mr. G. Mierzynski, MOE C.	Reg. Dir.		
	-Reid & Assoc. Ltd.			
	-Mr. W.A.S. Marshall, Proj.	Engra.		
	-Mr. A.J. Forsyth, Proj. En	ara.		A CONTRACT OF A
	-Mr. J. Toth, Design & Equi	pment	20	
ŝ	ec -Mr. W. Brink, Design & Equ	ipment .		V. Harris
			Director	0 >
	MOE 0732 9/81			

Ontario	Certificate of Ap (Sewage)	prova or RECEIVED TE MAY 6 1983	
Whereas	TOWNSHIP OF ORILL	.IA	
×x			
has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-			
the construction of sanitary	v sewage works facilities as	follows:	
SANITARY SEWER			
STREET	FROM	<u>T0</u>	
C.N.R. Right-of-Way	Hamilton Street	Quetton Street	

C.N.R. Right-of-Way

FORCEMAIN

Orillia Street

Hamilton Street

including service connections from the main sewer to the street line, as shown on the drawings or as may be approved by the operating authority in the future, all in accordance with the final plans and specifications prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of THIRTY THREE THOUSAND EIGHT HUNDRED DOLLARS (\$33,800.00).

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED ATTORONTO this 29th day of Attn:-Mr. J.B. Mather, Clerk, Twp. of Orillia cc:-Mr. J. Ferguson, Road Supt. -Mr. G. Mierzynski, MOE C. Reg. Dir. -Reid & Assoc. Ltd. -Mr. W.A.S. Marshall, Proj. Engrg. -Mr. A.J. Forsyth, Proj. Engrg. -Mr. J. Toth, Design & Equipment /ec -Mr. W. Brink, Design & Equipment

April

19 83

Director

MOE 0731 9/81

Ministère de l'Environnement

Ministry

Environment

of the

Certificate of Approval (Sewage) Certificat d'autorisation (eaux usées)

Number / Numéro 3-1459-87-006

Whereas / Attendu que Hope-Smith Lands Limited

of / d

Washago, Ontario

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of: a fait, conformément à l'article 24 de la loi sur les ressources en eau de l'Ontario, une demande d'autorisation: Private sanitary pumping station and forcemain to service a commercial development located on Part of Lot 14 and all of Lots 15, 16, 17 & 18 in the Township of Orillia equipped with 2 submersible grinder pumps each rated at 1.9 l/s at a total dynamic head of 6.8m with float switch controls, associated valves, electrical equipment, interconnecting piping, a natural vent, a forcemain and appurtenances.

Street

From

Hamilton St.

Forcemain

Approx. 45m E of Cumberland St.

Quetton St

TO

all in accordance with the revised plans received on August 26, 1987 plans and specifications prepared by Marshall Macklin Monaghan Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of FORTY TWO THOUSAND TWO HUNDRED DOLLARS (\$42,200.00).

> THIS IS A TRUE COPY OF THE ORIGINAL CERTIFICATE MAILED

Act-16 ON ... Wesh (Signed)



Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

Le présent document certifie qu'après vérification en bonne et due forme la construction dudit projet d'ouvrages a été approuvée aux termes de l'article 24 de la loi sur les ressources en eau de l'Ontario.

16 DATED AT TORONTO this day of DATÉ À TORONTO ce jour d cc: (Mr. J.B. Mather, Clerk, Township of Orillia Mr. A.F. Pelletier, Clerk, County of Simcoe Mr. N. Embree, Chief Approvals and Planning Uni Marshall Macklin Monaghan Limited 12. ...





.../2

Certificate of Approval (Sewage)

Whereas

..... TOWNSHIP OF ORILLIA

XQ

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval ofthe construction of a 4.77 ha two celled seasonal discharge waste stabilization pond to be located approximately 1700 m north and northwest of Hamilton Street -Washago (Part of Lots 10 and 11, Concession XV, Township of Orillia) in a natural rock basin and including an influent structure; four (4) berms; interconnecting piping; and outfall structure and all necessary appurtenances (Total effective storage volume at 1.5 m effective liquid depth = 47,800 m³; BOD loading rate = 8.11 kg/ha/d) with effluent discharge via an existing natural drainage

all in accordance with the final plans prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including land charges, engineering and contingencies, of ONE HUNDRED THOUSAND DOLLARS (\$100,000.00), subject to the following special terms and conditions which are considered necessary by the undersigned.

SPECIAL TERMS AND CONDITIONS

- (1) The Township will notify homeowners along the Severn River, in the area immediately east of the Highway No. 11 bridge, prior to the discharge of the waste stabilization pond effluent.
- (2) TYPE OF SAMPLE

Grab Sample

a) The waste stabilization pond shall be operated in such a manner and with such facilities as to maintain the following objectives in terms of effluent concentrations and waste loadings:

States may at 121 and 1 and 1 and

Effluent Parameter	Effluent Concentration	Effluent Waste Loading
B005	15 mg/L	614 kg
Suspended Solids	20 mg/L	815 kg
Total Phosphorus	1.0 mg/L	41 kg

di. 1. .

Now therefore this is to certify that after due enquiry the said proposed works have been approved

under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this 18th	day of	November	19.93
ttn:-Mr. J.B. Mather, Clerk, Twp. of Oril	lia	Hovember	10 03
cc:-Mr. G. Mierzynski, MOE C. Reg. Dir.			
-Reid and Associates Limited			
-Mr. W.A.S. Marshall, Project Supervis	sor		24
-Mr. J. Toth, Value Engineering			
-Mr. C.W. Brink Value Engineering			

Ontario

Certificate of Approval (Sewage)

Whereas

of

- 2 -

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-Special Terms and Conditions Cont'd.

b) Non-compliance is deemed to occur when any of the following effluent concentrations and/or waste loadings is exceeded based on the analytical results of the sampling programme described in paragraph 2c).

Effluent Parameter	Effluent Concentration	Effluent Waste Loading
BOD 5	25 mg/L	1024 kg
Suspended Solids	25 mg/L	1024 kg
Total Phosphorus	1 mg/L	41 kg

NOTE:

The foregoing effluent waste loading objectives and effluent waste loading non-compliance values are based upon an average daily inflow to the waste stabilization pond of $227.5 \text{ m}^3/\text{d}$ over 180 days and represent the total load discharged to the receiving stream over the discharge period.

c) The minimum sampling programme to be followed in assessing noncompliance of the BOD5, Suspended Solids and Total Phosphorus effluent parameters is as follows:

The waste stabilization pond must be sampled after treatment prior to discharge for checking compliance against the critical parameter (i.e. Total Phosphorus) as noted in Condition 2b).

The waste stabilization pond must be sampled for the effluent parameters noted in Condition 2a) once during discharge and on the final day of discharge.

d) Non-compliance with respect to effluent concentrations is considered to occur when the arithmetic mean of either BOD5, SS or phosphorus concentration of samples collected during the discharge period exceeds the corresponding value as stated in Condition 2b above.

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Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this 18th

day of

November

.....

Certificate of Approval (Sewage)

- 3 -

Whereas

of

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-

Special Terms and Conditions Cont'd.

e) Non-compliance with respect to effluent waste loadings is considered to occur when the arithmetic mean of either BOD5, suspended solids or phosphorus concentration of samples collected during the discharge period incorporated with the total flow over the discharge period exceeds the corresponding value as stated in Condition 2b above.

NOTE:

The total flow referred to above shall be the total flow registered by the magnetic flow meter at the Main Sewage Pumping Station between the end of one discharge period and the end of the next discharge period.

- f) Procedures related to the sampling programme shall be in accordance with the attached Appendix A.
- (3) A routine sampling and analysis programme shall be implemented and maintained in accordance with the following:

SAMPLE LOCATIONS

- Raw Sewage (Main Sewage Pumping Station Wet Well)
- Final Effluent (Waste Stabilization Pond)

ANALYSIS SAMPLING PARAMETERS

- BOD5
- Suspended Solids
- Total Phosphorus
- Ammonia plus ammonia nitrogen (effluent stream only)

SAMPLING FREQUENCY

Raw Sewage - minimum one (1) grab sample per month Final Effluent - as per Condition 2c above.

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this

18th

day of

November

1983

' '26 ' Director

MOE 0731 9/81

√an

SAMPLE COLLECTION

(a) All equipment coming in contact with the sample shall be clean.

SAMPLE PRESERVATION

- (a) If an automatic sampler is used, it should be located in a shaded area, rather than in direct sunlight.
- (b) The sample itself should be refrigerated at 4° C, if at all possible, throughout the collection period and during the time taken to transport the sample. If plant personnel deliver the samples, a styrofoam cooler can be used for this purpose. Small refreezable ice packs can be placed within the cooler. If, however, the samples must be shipped by courier or express service, it is recommended that a one-day delivery period should be requested.

SAMPLE SIZE

(a) At least one litre of sample from each sampling location should be submitted for the minimum analysis requirements (BOD₅, SS, Ammonia plus Ammonia Nitrogen and Total Phosphorus). If the effluent sample has less than 1 mm of solid matter when settled, or is almost clear when shaken, provide an extra litre of sample.

SUBMISSION OF ANALYSIS

(a) Samples should be submitted for analysis as soon as possible following collection. Sample delivery should ideally be made to the laboratory within 24 hours. Allowances should be made to schedule sampling and delivery to coincide with the days on which the analyses are normally performed.

SAMPLE ANALYSIS AND DATA REPORTING

- (a) If the operating authority wishes to use its own analytical equipment or submit samples to commercial laboratories the operating authority shall still submit samples to the Ministry of the Environment Laboratory for purposes of quality control auditing. Until the capability and accuracy of the plant or other laboratory are known. samples shall be submitted as normally required to the Ministry of the Environment Laboratory. As the capability and accuracy of the plant or commercial laboratory become known, the frequency of sample submission to the Ministry Laboratory may be reduced or possibly eliminated entirely. The frequency of such submissions for quality control auditing shall be as determined in writing by the District Officer, Municipal and Private Abatement, Barrie District Office. To allow comparison of analytical results, samples submitted for quality auditing purposes shall be duplicates of the samples analyzed by the plant or commercial laboratory.
- (b) To satisfy all, or a part of, the analytical requirments, operating authorities using their own facilities or commercial laboratories shall submit copies of the analytical results at least once per month to the District Officer, Municipal and Private Abatement, Barrie District Office.

.../2

Appendix "A" Cont'd.

(c) The operating authority shall maintain records of the analysis results for a minimum of five (5) years.





of the Environment

> TO: Mr. J.B. Mather, Clerk Township of Orillia P.O. Box 159, R.R. #4 West Street North Orillia, Ontario L3V 6J3

You are hereby notified that Final Certificate of Approval No. 3-1081-83-006 has been issued to you subject to the conditions outlined therein.

The reasons for the imposition of these conditions are as follows:

Condition 1

Notification of the homeowners is necessary to ensure they are aware of the impending discharge.

Condition 2

The effluent criteria relating BOD₅, Suspended Solids and Ammonia plus Ammonia Nitrogen are being imposed to prevent discharges of inadequately treated sewage. The concentration parameters are compatible with the proposed treatment system under normal operating and loading conditions.

The effluent criteria relating to Total Phosphorus concentration comply with the policy of the Ministry of the Environment to reduce nutrients loading to the Great Lakes Basin so as to minimize the nuisance growth of aquatic plant and algae.

Condition 3

The condition relating to the routine sampling program and analysis is being imposed to ensure that all pertinent data are available for the evaluation of the performance of the system and the water pollution control plant is operated and maintained at the level consistent with the design. You may by written notice served upon me and the

Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board.

This Notice should be served upon:

The Secretary, Environmental Appeal Board, 1 St. Clair Ave. West, 5th Floor, Toronto, Ontario.	AND	The Director, Section 24, O.W.R. Act, Ministry of the Environment, 135 St. Clair Ave. West, Toronto, Ontario. M4V 1P5
M4V 1K7		M4V 1P5

DATED at Toronto

this 18thday of November , 1983.

Director, Section 24, O.W.R. Act, Ministry of the Environment.

Ministère Ministry de Environment l'Environnement et de l'Énergie and Energy

AMENDMENT TO CERTIFICATE OF APPROVAL MUNICIPAL SEWAGE WNSHI WUMBER 3-1081-83-006 Page 1 of 2

NOTICE OF AMENDMENT

To the Applicant:

of the

The Corporation of the Township of Orillia R. R. # 4, Box 159 Orillia, Ontario L3V 6J3

The Applicant is hereby notified that the approval issued under Certificate of Approval No. 3-1081-83-006 dated November 18, 1983 for the construction of a two celled seasonal discharge waste stabilization pond for the Hamlet of Washago on part of Lots 10 and 11, Concession XV, Township of Orillia. is hereby amended as follows:

The Statement, "the magnetic flow meter" of Special Terms and Conditions (2) (e) is hereby revoked;

In substitution for the above revocation, the following is inserted:

"three (3) elapsed time meters with a data logging system and verification of pump rates for the two sewage pumps on a semi-annual basis".

This Notice shall constitute part of the approval issued under Certificate of Approval No. 3-1081-83-006 dated November 18, 1983.

The Applicant may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

- The portions of the approval or each term or condition in the approval in respect of which the hearing is 1. required, and;
- The grounds on which the Applicant intends to rely at the hearing in relation to each portion appealed. 2.

The Notice should also include:

- 3. The name of the appellant;
- The address of the appellant; 4.
- 5. The Certificate of Approval number;
- The date of the Certificate of Approval; 6.
- 7. The name of the Director;
- The municipality within which the sewage works are located; 8.

And the Notice should be signed and dated by the appellant.



AMENDMENT TO CERTIFICATE OF APPROVAL MUNICIPAL SEWAGE NUMBER 3-1081-83-006 Page 2 of 2

This Notice must be served upon:

The Secretary, Environmental Appeal Board, 112 St. Clair Avenue West, Suite 502, Toronto, Ontario. M4V 1N3

AND

The Director, Section 53, Ontario Water Resources Act, Ministry of Environment and Energy, 250 Davisville Avenue, 3rd Floor, Toronto, Ontario. M4S 1H2

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this

30th day of

June,

1993. W. Gregson, P Eng. Director Section 53 Ontario Water Resources Act

GL/nk

Att: Mr. J. B. Mather, Clerk, Twp. of Orillia cc: Mr. G. Carpentier, Supervisor, Approvals & Pesticides Management Mr. D.G. Carr, P. Eng., Ainley and Associates Ltd.



Ministère de l'Environnement

Certificate of Approval (Sewage) Certificat d'autorisation (eaux usées)

2 1988

Number / Numéro 3-0051-86-006

Whereas / Attendu que

TOWNSHIP OF ORILLIA

of / d

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of: a fait, conformément à l'article 24 de la loi sur les ressources en eau de l'Ontario, une demande d'autorisation:

a new 250 mm diameter polyethylene effluent outfall from the existing two celled seasonal discharge waste stabilization pond located approximately 1700 m north and northwest of Hamilton Street, Washago (Part of Lots 10 and 11, Concession XV, Township of Orillia) consisting of approximately 225 m of Series 45 butt-fused outfall following the existing ground profile together with a gate valve box shut-off terminations at Highway No. 11 immediately north of the Severn River,

all in accordance with the detailed drawing and supporting information prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of SEVENTEEN THOUSAND DOLLARS (\$17,000.00).

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

Le présent document certifie qu'après vérification en bonne et due forme la construction dudit projet d'ouvrages a été approuvée aux termes de l'article 24 de la loi sur les ressources en eau de l'Ontario.

DATED AT TORONTO this 24th day of *jourd* DATÉ À TORONTO ce *jourd* Attn: Mr. J.B. Mather, Clerk, Township of Orillia cc: Mr. J.C. Ferguson, Twp. Engineer Mr. G. Mierzynski, MOE C, Reg. Dir. Reid & Associates Ltd.

0731 06/84

Director / Directeur

CEPTIFICATE No 1-0294-71- 33	261 Attac	ment: Air Approval
7/-753: en: Mr. W.A. Marshall		DEGENVED
J.D. Reid and Assoc. Ltd.	Ontario	
Region) MINU	ral	AUG 8 1975
Mr. J. Toth (MOE Tech.	SIKI OF THE ENVIRONME	REID & ASSOC LTD
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Whereas	THE PROVINCE OF ONTAR	10 2 3 OI
œ		Ved Conalist.
has applied in accordance with Section 4	2 of The Optania Water Becourses Act fo	w approval of
construction of a sanita	ry severage works system	to serve the Township
of Orillia (Community of	Washago) as follows:	
STREET	FROM	TO
Easmment Sanitary sewers Rama St. (Hwy. #69)		approx. 500' S. of Rama St. (Proposed Sewage Pumping Station No. 2)
Easement	approx. 160' N. of Rama St.	approx. 1140' N. of Edgar St.
Easement	approx. 300' S. of Hamilton St.	approx. 1700' N. of Hamilton St.
Hamilton St. and Ease- ment	approx. 200' W. of Muskoka St. (Ease- ment)	approx. 300' E. of Muskoka St. (Severn Rive
Easement parallel to Severn River	Hamilton St.Easement	Edgar St.
Edgar St.	approx. 200' E. of Muskoka St. (proposed Sewage Pumping Station No. 1)	approx. 630' E. of Muskoka St.
Forcemains		
Easement	Edgar St. (proposed Sewage Pumping Station No. 1)	Hamilton St.
Hamilton Street	Easement	approx. 400' W. of Muskoka St. (Easement)
Easement	Hamilton St.	approx. 1850' N. of

Section 42 of The Ontario Water Resources Act.

continued:

DATED AT TORONTO this

lst

day of

August

19 75

Director

in man and a second house





1001003 33 Chast Contract MINISTRY OF THE ENVIRONMENT

SEWAGE WORKS APPRO A Ins are approved.

Whereas

of

- 2 -

has applied in accordance with Section 42 of The Ontario Water Resources Act for approval of: -

construction of a sanitary sewerage works system to serve the Township of Orillia (Community of Washago) (continued: -)

STREET

FROM

TO

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when

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5

Wis Pote

Proposed Sewage Pumping Station #2

approx. 180' N.

Outfall sewer

Easement

Easement

Proposed Sewage Treatment West Branch of Plant Severn River

including building sewers from the main sewer to the stret line together with the construction of two (2) sewage pumping stations as follows:

Sewage Pumping Station No. 1 - to be located at the west end of Edgar Street approx. 400' N. of Albany St. and to be equipped with two (2) 183 IGPM submersible type raw sewage pumps a standby diesel generator, an emergency overflow to the Severn River and all necessary appurtenances and controls,

Sewage Pumping Station No. 2 - to be located on the south side of Rama St. approx. 150' E. of Muskoka St. and to be equipped with one (1) 81 IGPM submersible type raw sewage pump, an emergency overflow to the adjacent sanitary sewers and all necessary appurtenances and controls,

Sewage Treatment Plant - to be located approx. 1725' N. of Hamilton St. on the E. side of Hwy. #11 (Part Orillia Island, Twp. of Orillia) and consisting of a 50,000 IGPD extended aeration sewage treatment plant c/w influent works, grit channels, an aeration tank, a final clarifier; effluent chlorination; phosphorus removal facilities, a control building and all necessary appurtenances and controls with effluent discharge to the West Branch Severn River, all in accordance with the report prepared Now Therefore this is to certify that after due enquiry the said proposed works have been approved under Section 42 of The Ontario Water Resources Act.

continued:

DATED AT TORONTO this

lst

August day of 19 75 Director

1105 10 001 7/70





MINISTRY OF THE ENVIRONMENT

SEWAGE WORKS APPROVAL

Whereas

of

has applied in accordance with Section 42 of The Ontario Water Resources Act for approval of: -

by J.D. Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including land charges, engineering and Contingencies, of FIVE HUNDRED FORTY SIX THOUSAND NINE HUNDRED AND SIXTY DOLLARS (\$546,960.00),

3

PRELIMINARY APPROVAL for purpose of facilitating works herein set out - not to be regarded as fulfilling requirements of this Act. Final certificate will be issued when detailed plans and specifications are approved,

Row Therefore this is to certify that after due enquiry the said proposed works have been approved under Section 42 of The Ontario Water Resources Act.

DATED AT TORONTO this

1st

day of

1975

GP Director

August



Appendix B

Municipality Monitoring Program Mechanical Plants Forms


Fields marked with	an asterisk (*) are	mandatory.									
Project Name Washago Lagoor	ı										2
Facility Address	6	1								1	
Unit Number	Street Number 1021	Street Name Hurlwood L	ane							PO Box 159	
Municipality/City/To Orillia	own		Province ON - On	tario						Postal C L3V 6J	ode 3
Operating Authority The Corporation	y of the Township o	of Severn									
Mailing Address	5									÷	
Unit Number	Street Number 1021	Street Name Hurlwood L	ane							PO Box 159	
Municipality/City/To Orillia	own		Province ON - On	tario						Postal C L3V 6J	ode 3
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TKN		(mg/L)	0002	20		2					
Total Pho	osphorus	(mg/L)	0003	33		2					
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Operator 705-345	Telephone -1841	e Number				Ret	urn Envi	com ironm	nplete nental	ed for Monit	rm to	and F	Repor	rting I	Brai	nch,	ME	CP, at
Operator	Email Add	iress					Was	steWa	aterRe	eportir	ng@o	ntario	.ca A	nd				
tdrouin@	evern.c	a				2.	You		rironm	ental	Office	er at y		cal D)istr	ict/A	rea	
Commen	IIS					1	www	v.onta	ario.ca	a/envi	ronme	ent-an	id-en	ergy/	e. r min	istry	<u>ш</u>	
							envi	ronm	ent-di	strict-	locato	or)						



Fields marked with	n an asterisk (*) are	e mandatory.										
Project Name Washago Lagoo	n											
Facility Address	S	<i>.</i>									4	
Unit Number	Street Number 1021	Street Name Hurlwood L	ane								PO Box 159	
Municipality/City/T Orillia	own		Province ON - On	tario							Postal C L3V 6J3	ode 3
Operating Authorit The Corporation	y of the Township	of Severn										
Mailing Addres	S	12									5	
Unit Number	Street Number 1021	Street Name Hurlwood L	ane								PO Box 159	
Municipality/City/T Orillia	own		Province ON - On	tario							Postal C L3V 6J3	ode
File No.	Works Nun	nber *	Мо	D	ata Pe	eriod * Year		ור	Days	Di	scharge Type	Update Code
4 6 1	2 0 0 0	2 2 7	3 0	3	2	0	2 3		3 1	-	2	R
		3	11 10		- 193 -				20 21		22	
C.P.												
3 5 Flows			Paramete	r Coo	de	Dec.	-	Month	ly Results	•		
12 13 Total Flo	w	(10 ³ m ³)	5001	0		3			3.24	45		
Average	Daily Flow	(10 ³ m ³ /d)	5001	5		3			0.10	05		
Maximur	m Daily Flow	(10 ³ m ³ /d)	5002	20	-	3						
			30		34	35	38			46		
3 5 Bypass							P				# of Occ	currences
12 13 Plant By	pass Volume	(10 ³ m ³)	5027	0		3						
Duration	((hours)	8168	30		1						
			30		34	35	38					.]
3 6 Raw Se	wage	10 JUL 1			!		P			-	# of S	amples
12 13 BOD ₅		(mg/L)	0000)1	_	0			2	15		1
Suspend	ded Solids	(mg/L)	0000	06		0			1	/6		1
TKN		(mg/L)	0002	20	_	2			39.	/0		1
Total Ph	osphorus	(mg/L)	0003	33	- 24	1	38		4	.6	48	51
	flue at		30		34	<u></u>	Ĩ				40	
12 13 Total Eff	Il Volume To Wate	rcourse (103 m ³)	5028	30		3						
Flow Du	ration	(hours)	8168	30	_	1						
Cell Der	ath	(m)	5029	20	-	1				-		
CBOD		(mg/L)	0000)2	_	1				-		
BOD ₆		(mg/L)	0000)1		1	-					
Suspen	ded Solids	(ma/L)	0000	06	_	1				-		
Ammoni	ia + Ammonium	(mg/L)	000	19	_	2						
TKN		(ma/L)	0002	20	-	2						
Total Ph	osphorus	(mg/L)	0003	33		2						
		(3)	30		34	35	38				48	51
0 9 Disinfe	ction					F	P					
12 13 Chlorine	Used	(kg as Cl ₂)	5032	20		1	L					
Chlorine	e Dosage	(mg/L as Cl ₂)	804	10		1	L					
Chlorine	Residual	(mg/L as Cl ₂)	8042	20		1						
			30		34	35	38	6			48	51
Operator Telepho 705-345-1841	one Number			1.	Envir	ronmer	ntal M	onitor	ing and R	eporti	ing Branch	, MECP, at
Operator Email A	ddress *			2	Your	Envire	nmer	ntal O	fficer at vo		al District/	Area
Commente	i.ud			-	MEC	P Offic	ce.					
Sommenta				Min	istry (Contac	t Ema	ail Add	dress *			
				Pet	ter.Vr	eugde	ennil	yonta	ario.ca			4



Project N Washac	lame to Lagoor	1						C- 11										
Facility	Address																	
Unit Nun	nber	Street Number 1021	Street Nan Hurlwood	ne Lane										PC) Bo	x		
Municipa Orillia	ality/City/To	own		Prov ON -	ince - Ont	tario			5.57.005					Po L3	stal	Coc J3	le	
Operatin The Cor	g Authority	of the Township of	of Severn											-				
Mailing	Address																	
Unit Nun	nber	Street Number 1021	Street Nan Hurlwood	ne Lane										PC) Bo	x		
Municipa Orillia	ality/City/To	own		Prov ON -	ince - Ont	tario								Po L3	stal	Coc J3	le	
File No.		Works Num	ber *		Mor	Da nth	ata F	Perio Y	d * ear			Days	Dis	icha Type	rge e] [Upda	te e
4 6		2 0 0 0	2 2 7	3	0	3	2	0	2	3		3 1	1	2		J	R	ſ
C.P.	1				10		-			15				~~~			00	
3 6	Raw Sew	age		Parame	eter C	ode		Dec		Month	ly Av	erage	Results] #	#	of S	ample	s
12 13							1											
															-	_		_
									╎┝									_
								-						+	-			-
														1				
			1	30		3	4	35	38	3				-				
3 9	Final Efflu	ient	[Parame	eter C	ode] #	Dec		Month	ly Av	erage	Results] P	#	of S	ample	s
12 13	Alkalinity,	Total	(mg/L)	00	051			4										
	Conductiv	vity 25°C	(µS/cm)	91	004			4										
	E. Coli		(CT/100ml)	91	000			4										
	Nitrate, U	nfiltered reactive	(mg/L)	00	022			4								_		_
	Nitrite, Ur	filtered reactive	(mg/L)	00	021			4	┥┝			ŝ		-	_			_
	Temperat	ure, Water	(°C)	80	250			4	+					1	-			-
	Un-ionize	d Ammonia	(mg/L)	91	012			4										
	Dissolved	Oxygen	(mg/L)	00	003]	4										
	Hydrogen	Sulphide	(mg/L)	83	8008			4										
														-				_
														1	-			-
							1							1				-
Oncenter	Tolochar	o Number		30	ī	34 Ret	4	35	38	ad fo	rm +	<u>.</u>						
705-345	5-1841	e Number				1. E	Envi	ronm	nenta	I Moni	toring	and F	Reportin	g Br	anc	h, M	ECP,	at
Operator tdrouin@	Email Add	dress				2 1	vas (our	Enve	ironn	nental	Offic	er at v	ca And		stric	t/Arc	a	
Commer	nts				\neg	1	MEC	PO	ffice.	(Find	your	local M	IECP of	ffice	htt	ps://	a	
						<u>v</u>	envir	ronm	ent-c	listrict-	-locat	or)	a-energ	y/m	Inist	ry-		



Fields marked	I with an asterisk (*) are	mandatory.									
Project Name Washago La	goon										
Facility Add	ress	2010 - 10 Contra									
Unit Number	Street Number 1021	Street Name Hurlwood L	ane							PO Box 159	
Municipality/C Orillia	ity/Town		Province ON - Or	tario						Postal C L3V 6J	Code 3
Operating Aut The Corpora	hority tion of the Township of	of Severn									
Mailing Add	ress										
Unit Number	Street Number 1021	Street Name Hurlwood L	ane							PO Box 159	:
Municipality/C Orillia	ity/Town		Province ON - Or	ntario	6					Postal C L3V 6J	Code 3
File No.	Works Num	ber *	Mo	Da onth I	ata Peri	od * Year		Days	Di	scharge Type	Update Code
4 6	1 2 0 0 0	2 2 7	3 0	4	2 () 2	3	3 0		2	R
	3	<u> </u>	11 10				19	20 21		22	80
3 5 Flow	vs		Paramete	r Cod	e 🖡	Dec.	Mor	thly Result	s		
¹² ¹³ Tota	I Flow	(10 ³ m ³)	500	10		3		6.6	62		
Aver	rage Daily Flow	(10 ³ m ³ /d)	500	15	71	3		0.2	22		
Maxi	imum Daily Flow	(10 ³ m ³ /d)	5002	20	-1 -	3					
			30		34	35	38		46	# +(0 +	
3 5 Byp	ass t Runass Volume	(103 m3)	502	70	- -	<u> </u>	- 		_	# of Oc	currences
Dura	ation	(10° ms)	9169	20	- +	1			-		
Dura	1001	(nours)	30	50	34	35	38				
3 6 Raw	Sewage				P	1				# of S	Samples
12 13 BOD	D ₅	(mg/L)	0000	01		0			26		1
Sus	pended Solids	(mg/L)	0000	06		0		1	85		1
TKN		(mg/L)	0002	20	$ \rightarrow $	2		8.	80		1
Tota	I Phosphorus	(mg/L)	000	33		1	38	(0.7	48	1
3 9 Fina	l Effluent		50		ື 🗗	ຶ	Ĭ			40	51
¹² ¹³ Tota	I Effl. Volume To Water	course (103 m3)	5028	80		3					
Flow	v Duration	(hours)	8168	80		1					
Cell	Depth	(m)	5029	90		1					
CBC	DD ₅	(mg/L)	0000	02		1					
BOD	D ₅	(mg/L)	0000	01		1					
Sus	pended Solids	(mg/L)	0000	06		1					
Amn	nonia + Ammonium	(mg/L)	000	19	$ \rightarrow $	2			_		
TKN		(mg/L)	000	20		2					
Tota	I Phosphorus	(mg/L)	0003	33	[2	38			48	51
0 9 Disi	nfection	3	50		Ĩ 🖡	Ĩ	Ň			40	51
12 13 Chlo	orine Used	(kg as Cl ₂)	503	20	ר ר	1					
Chlo	orine Dosage	(mg/L as Cl ₂)	804	10	-1 -	1					
Chlo	orine Residual	(mg/L as Cl ₂)	8042	20	11	1					
			30		34	35	38			48	51
Operator Tele 705-345-184	phone Number			Retu 1. E	u rn co Environ	mple menta	ted for I Monite	m to: oring and R	eporti	ng Branch	, MECP, at
Operator Ema	ail Address *			2	<u>NasteV</u> Your Fr	VaterF	nental (g@ontario. Officer at vo	ca An	d al District/	Area
Comments				- I	MECP	Office.					1.555
				Minis Pete	stry Col er.Vreu	ntact E Igden	Email Ad	ddress * tario.ca			



Project N Washag	lame lo Lagoon	1															
Facility	Address	1															
Unit Num	nber	Street Number 1021	Street Nar Hurlwood	ne I Lane									F	20 159	Box		
Municipa Orillia	lity/City/To	own	·	Prov	vince - Ont	tario	(F	20S	tal C	ode 3	
Operating The Cor	g Authority	of the Township	of Severn														
Mailing	Address		(1) (1)														
Unit Num	nber	Street Number 1021	Street Nar Hurlwood	me I Lane									F 1	20 159	Box		
Municipa Orillia	lity/City/To	own		Prov	vince - Ont	tario							F	20S	tal C	ode	
File No.		Works Nu	mber *		Mor	Da nth	ata F	Perio	d * ear		Days		Disch Ty	narç pe	je	U	pdate Code
4 6	1	2 0 0 0	2 2 7	3	0	4	2	0	2	3	3	0	2	2	_	Т	R
1 2	3			11	16					19	20 2	1	2	2			80
C.P.																	
3 6	Raw Sew	age		Parame	eter C	ode		Dec	Mo	onthly	Averag	e Resu	ults	B	# of	Sam	ples
12 13														L			ľ
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									-	_			_	╞		_	
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						-			-				-	ŀ			
	-							-	-				-	F		A. 13.24	
				30		3-	4	35	38					L			
3 9	Final Efflu	uent	1	Parame	eter C	ode		Dec	Mo	onthly	Averag	e Resu	lts	Þ	# of	Sarr	ples
12 13	Alkalinity,	Total	(mg/L)	00	0051		1	4						F			
	Conductiv	vity 25°C	(µS/cm)	91	1004]	4									
	E. Coli		(CT/100ml)	91	1000			4									
	Nitrate, U	nfiltered reactive	(mg/L)	00	0022			4						L			
	Nitrite, Un	filtered reactive	(mg/L)	00	0021			4						L			
	pH		(10)	80	0770	-		4	-					F			
	l emperat	d Ammonic	(°C)	80	1012			4	-				_	┝			
	Dissolved		(mg/L)	91	1012			4	-				_	┢			
	Hydrogen	Sulphide	(mg/L)	83	3008			4	-				-	┢			
	injulogen	oupride	(119/2)	00	0000			-	-				-	H			
									-				-	F			
				1					-				-	F			
							1						-	F			
							1							F			
				30		34	4	35	38			3		۵ –			
Operator 705-345	Telephon 1841	e Number				Retu	urn Envi	ronm	pletec ental M	l fori Ionito	m to: oring and	Repo	rting E	Bra	nch,	MEC	CP, at
Operator tdrouin@	Email Add	dress				2	Vas (our	Envi	ronme	ntal C)fficer at	vour l	nd ocal F)ict	rict/A	rea	
Commen	ts				-	r	MEC	PO	fice. (F	ind ye	our local	MECF	Poffic	e:	https	://	
						<u>v</u>	envir	onta	ent-dist	enviro trict-lo	onment-a	and-en	ergy/i	min	listry		



Fields marked with	n an asterisk (*) are	mandatory.							
Project Name	n								
Facility Address	8								
Unit Number	Street Number	Street Name Hurlwood La	ane					PO Box 159	
Municipality/City/T Orillia	own		Province ON - Onta	ario				Postal C L3V 6J3	ode
Operating Authorit	y of the Township of	of Severn							
Mailing Addres	S	1.5							
Unit Number	Street Number 1021	Street Name Hurlwood La	ane					PO Box 159	
Municipality/City/T Orillia	ōwn		Province ON - Ont	ario				Postal C L3V 6J3	ode
File No.	Works Num	nber *	Mor	Data I	Period * Year		Days	Discharge Type	Update Code
4 6 1	2 0 0 0	2 2 7	3 0	5 2	0 2	3	3 1	2	R
1 2 3			1 16			19	20 21	22	
C.P.		ſ	Parameter	Code	Dec	Mon	thly Results		
¹² ¹³ Total Flo	W	(10 ³ m ³)	50010	0	3		4.270		
Average	Daily Flow	(10 ³ m ³ /d)	5001	5	3		0.137		
Maximu	m Daily Flow	(10 ³ m ³ /d)	5002	0	3				
		, , ,	30	34	35	38	46		
3 5 Bypass		(1022)	5007	0	FP F	- 		# 01 Occ	urrences
Plant By	pass volume	(10 ³ m ³)	8168	0	1				
Duration		(110013)	30	34	35	38			
3 6 Raw Se	wage	60 000400 N						# of S	amples
12 13 BOD ₅		(mg/L)	0000	1	0		172		1
Suspen	ded Solids	(mg/L)	0000	6	0		128		1
TKN Tatal Dh		(mg/L)	0002	2	2		30.50	-	1
Total Pr	losphorus	(mg/L)	30	3 34		38	4.5	48	51
3 9 Final Ef	fluent								
12 13 Total Ef	fl. Volume To Water	rcourse (103 m3)	5028	0	3		22.931		
Flow Du	iration	(hours)	8168	0	1		101.0		
Cell Dep	oth	(m) (ma/l.)	5029	0	1				
		(mg/L)	0000	2		-	67		4
Suspen	ded Solids	(mg/L)	0000	6	1		4.0		4
Ammon	ia + Ammonium	(mg/L)	0001	9	2		2.80		4
TKN		(mg/L)	0002	0	2		4.20		4
Total Pl	nosphorus	(mg/L)	0003	3	2		0.10		4
			30	34	35	38		48	51
0 9 Disinfe	ction	(ha as (11)	5000	0					
12 13 Chlorine	e Usea	(kg as Cl ₂) (mg/L as Cl ₂)	5032	0	1	-			
Chlorine	e Residual	(mg/L as Cl ₂)	8041	0	1				
Chionin		(ing/2 00 012)	30	34	35	38		48	51
Operator Telepho 705-345-1841	one Number			Return	n comple	ted for al Monit	rm to: oring and Repo	rting Branch	, MECP, at
Operator Email A	ddress *			Wa	steWater	Reportir	ng@ontario.ca	And	
tdrouin@severr	n.ca			2. You ME	CP Office	mental	Officer at your I	ocal District/	Area
Comments				Ministry Peter.	Contact I	Email A hil@or	ddress * ntario.ca		



Facility Address Street Name Street Name PO Box 1021 Street Name Province Postal Code Onlian Province Postal Code Onlian ON - Ontario Postal Code The Corporation of the Township of Severn Mailing Address Postal Code Municipality(CityTown Street Name Province Postal Code The Corporation of the Township of Severn Street Name Postal Code Postal Code Municipality(CityTown Street Name Province Postal Code Ext Street Name File No. Vorks Number * Image: Street Name Postal Code Ext Street Name 7 1 2 0 0 5 2 0 3 1 Type Code 7 3 T Postal Code Type Code Ext Street Name Postal Code Ext Street	Project N Washag	Name 30 Lagoon	1														
Unit Number Steel Number Issel Name Hurrivood Lane PO Box Iss Municipality/City/Town Orifila Postal Code ISV 6J3 Postal Code ISV 6J3 Operating Authority The Corporation of the Township of Severn Postal Code ISV 6J3 Postal Code ISV 6J3 Municipality/City/Town Orifila Steel Name Hurrivood Lane PO Box ISV 6J3 Postal Code ISV 6J3 Municipality/City/Town Orifila Vorks Number * Isteel Name Hurrivood Lane Postal Code ISV 6J3 Isteel Name ISV 6J3 Postal Code ISV 6J3 Isteel Name ISV 6J3 Postal Code ISV 6J3 Isteel Name ISV 6J3	Facility	Address															
Municipality(City/Town ORI-Inatio Postal Code IN - Ontatio Postal Code IN - Ontatio Operating Authority The Corporation of the Township of Severn Image Authority Mailing Address PO Box Unit Number Street Name Hurtwood Lane PO Box Mailing Address Postal Code ID21 Postal Code ID21 Postal Code ID2 Municipality(City/Town Orillia Postal Code ID2	Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me I Lane									PC 15	9 Box		
Operating Authority Porto Porto <td>Municipa Orillia</td> <td>ality/City/To</td> <td>own</td> <td></td> <td>Provi</td> <td>ince - On</td> <td>tario</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Po L3</td> <td>stal Co V 6J3</td> <td>ode</td> <td></td>	Municipa Orillia	ality/City/To	own		Provi	ince - On	tario							Po L3	stal Co V 6J3	ode	
Mailing Address Street Number Street Number Street Number PO Box 1021 Municipality(CityTown On - Ontario Postal Code Onlina ON - Ontario Data Period* Days Discharge Update 7 1 2 0 0 2 2 7 3 0 5 2 2 3 1 2 2 R R C.P. 3 6 Raw Sewage Parameter Code Poe Monthly Average Results # # of Samples R	Operatin The Cor	g Authority	of the Township o	f Severn													
Unit Number Street Name 1021 Street Name Province ON - Oritario Po Box 130 (3) Municipality/City/Town Orita Image: Contraction of the street Name (N - Oritario) Province ON - Oritario Postal Code (3) (1) (2) (2) (2) (2) (3) (3) (1) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (2) (3) (3) (1) (2) (2) (3) (3) (1) (2) (3) (2) (3) (2) (3) (3) (3) (3) (3) (3) (3) (3) (3) (3	Mailing	Address															
Municipality/City/Town Orilla Province ON - Ontario Province ON - Ontario Data Period * Works Number * Data Period * Year Days Discharge Update Code 4 6 1 2 0 0 2 7 3 1 Data Period * Days Discharge Update Type Update Code Rev 3 6 Raw Sewage Parameter Code Pbc Monthy Average Results # # of Samples 12 13 PH 2 0 3<	Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me I Lane									PC	Box 9		
File No. Works Number * Data Period * Data Period * Data Period * Data Period * Discharge Update Code 4 6 1 2 0 0 2 7 3 1 2 0 2 7 3 1 2 2 3 1 2 2 3 1 2 2 2 80 C.P. Raw Sewage Parameter Code Pa	Municipa Orillia	ality/City/To	own		Provi ON -	ince - On	tario							Po L3	stal Co V 6J3	ode	
4 6 1 2 0 0 2 7 3 0 5 2 0 2 3 1 2 2 2 80 C.P. 3 6 Raw Sewage Parameter Code Moet Monthiy Average Results # # of Samples 12 13 PH 13 14 11 14 14 14 14 14 14 14 14 14 14 14 14 <	File No.		Works Num	ber*		Mo	Da nth	ata P	erio Y	d * ear		Day	s Dis	char	ge	Upd Co	late de
C.P. 3 6 Raw Sewage Parameter Code Monthly Average Results # # of Samples 12 13 PH Temp	4 6		2 0 0 0	2 2 7	3	0	5	2	0	2	3	3	1	2		R	2
3 6 Raw Sewage Parameter Code Monthly Average Results # # of Samples 12 13 PH	CP	1				10					15	20		22		00	
12 13 PH Temp Image: Strate St	3 6	Raw Sewa	age		Parame	ter C	ode	🛱	Dec	М	onthl	y Averag	e Results	🋱	# of	Sampl	les
Temp	12 13	PH						11						11			
3 9 Final Effluent Parameter Code Monthly Average Results # of Samples 12 13 Atkalinity, Total (mg/L) 00051 4 12 13 Atkalinity, Total (mg/L) 00051 4 12 13 Atkalinity, Total (mg/L) 00051 4 12 13 Atkalinity, Total (mg/L) 00022 105.0000 4 11 Universe, Unfiltered reactive (mg/L) 00022 4 105.0000 4 12 13 Atkalinity, Total (mg/L) 00022 4 105.0000 4 12 14 105.0000 4 4 105.0000 4 13 13 105.0000 4 4 105.0000 4 14 7.8300 4 4 11.5000 4 14 11.5000 4 11.5000 4 4 11.5000 4 14 11.5000 4 11.5000 4 10.5000 4 10.5000 4 10.5000 4 10.5000 4		Temp] [
3 9 Final Effluent Parameter Code Monthly Average Results # of Samples 12 13 Alkalinity, Total (mg/L) 00051 4 12 13 Alkalinity, Total (mg/L) 00051 4 12 13 Alkalinity, Total (mg/L) 00051 4 12 13 Alkalinity, Total (mg/L) 00022 105.0000 4 Nitrite, Unfiltered reactive (mg/L) 00022 4 105.0000 4 Nitrite, Unfiltered reactive (mg/L) 00021 4 11.5000 4 Un-ionized Ammonia (mg/L) 91012 4 11.5000 4 Dissolved Oxygen (mg/L) 83008 4 11.5000 4 Hydrogen Sulphide (mg/L) 83008 4 11.5000 4 130 34 35 38 38 38																	
3 9 Final Effluent Parameter Code Monthly Average Results # # of Samples 12 13 Alkalinity, Total (mg/L) 00051 105.0000 4 12 13 Alkalinity, Total (mg/L) 00051 105.0000 4 12 13 Alkalinity, Total (mg/L) 00022 4 105.0000 4 14 E. Coli (CT/100ml) 91004 4 4 105.0000 4 14 H 80770 4 4 4 11.5000 4 10-ionized Ammonia (mg/L) 91012 4 4 11.5000 4 10-ionized Ammonia (mg/L) 83008 4								╡┟	_								
3 9 Final Effluent Parameter Code Monthly Average Results # of Samples 12 13 Alkalinity, Total (mg/L) 00051 4 105.0000 4 12 13 Alkalinity, Total (mg/L) 00051 4 4 105.0000 4 12 13 Alkalinity, Total (mg/L) 00021 4 4 105.0000 4 14 4 105.0000 4 4 105.0000 4 14 00021 91004 4								┥┟	_								
3 9 Final Effluent Parameter Code Monthly Average Results # of Samples 12 13 Alkalinity, Total (mg/L) 00051 4 105.0000 4 12 13 Alkalinity, Total (mg/L) 00051 4 105.0000 4 12 13 Alkalinity, Total (mg/L) 00022 4 105.0000 4 10 Nitrate, Unfiltered reactive (mg/L) 00022 4								┥┝						4 4	_		
30 34 35 38 3 9 Final Effluent Parameter Code Monthly Average Results # of Samples 12 13 Aklalinity, Total (mg/L) 00051 4 105.0000 4 E. Coli (CT/100ml) 91004 4 105.0000 4 Nitrate, Unfiltered reactive (mg/L) 00022 4 105.0000 4 PH 80770 4 7.8300 4 105.0000 4 Imperature, Water (°C) 80250 4 11.5000 4 Un-ionized Ammonia (mg/L) 91012 4 11.5000 4 Dissolved Oxygen (mg/L) 00003 4 105.000 4 Hydrogen Sulphide (mg/L) 00003 4 105.000 4 So 34 35 38 38 38								┥┝	_								_
30 34 35 38 3 9 Final Effluent Parameter Code Monthly Average Results # of Samples 12 13 Alkalinity, Total (mg/L) 00051 4 105.0000 4 E. Coli (CT/100ml) 91004 4 4 105.0000 4 Nitrate, Unfiltered reactive (mg/L) 00022 4 105.0000 4 pH 80770 4 7.8300 4 11.5000 4 Temperature, Water (*C) 80250 4 11.5000 4 Un-ionized Ammonia (mg/L) 91012 4 11.5000 4 Dissolved Oxygen (mg/L) 80003 4 11.5000 4 Hydrogen Sulphide (mg/L) 83008 4 11.5000 4 0 30 34 35 38 38								┥┝	_	_				$\left\{ \right\}$			_
3 9 Final Effluent Parameter Code Dec Monthly Average Results # of Samples 12 13 Alkalinity, Total (mg/L) 00051 4 12 13 Alkalinity, Total (mg/L) 00051 4 12 13 Alkalinity, Total (mg/L) 00051 4 14 E. Coli (CT/100ml) 91004 4 15 Object (mg/L) 00022 4 16 Mitrite, Unfiltered reactive (mg/L) 00021 4 17 Temperature, Water (*C) 80250 4 11.5000 4 17 Dissolved Oxygen (mg/L) 91012 4 11.5000 4 105.000 4 11 Dissolved Oxygen (mg/L) 91012 4 105.000 4 105.000 4 11 Dissolved Oxygen (mg/L) 83008 4 105.000 4 105.000 4 105.000 4 105.000 4 105.000 4 105.000 4 105.000 4 105.000 <td></td> <td></td> <td></td> <td></td> <td>30</td> <td>- 110</td> <td>3-</td> <td>ļL</td> <td>35</td> <td>38</td> <td></td> <td></td> <td></td> <td>וו</td> <td></td> <td></td> <td></td>					30	- 110	3-	ļL	35	38				וו			
12 13 Alkalinity, Total (mg/L) 00051 4 Conductivity 25°C (µS/cm) 91004 4 E. Coli (CT/100ml) 91000 4 Nitrate, Unfiltered reactive (mg/L) 00022 4 Nitrite, Unfiltered reactive (mg/L) 00021 4 pH 80770 4 Temperature, Water (°C) 80250 4 Un-ionized Ammonia (mg/L) 91012 4 Dissolved Oxygen (mg/L) 00003 4 Hydrogen Sulphide (mg/L) 83008 4 Midress 1 58	3 9	Final Efflu	ent		Parame	ter C	ode	1	Dec	М	onthly	v Averag	e Results	1	# of	Sampl	es
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Hydrogen Sulphide (mg/L) 83008 4 Hydrogen Sulphide (mg/L) (mg/L) (mg/L) Hydrogen Sulphide (mg/L) (mg/L) (mg/L) State (mg/L) (mg/L) (mg/L) (mg/L) State (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) State (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) State (mg/L) (mg/L) <t< td=""><td></td><td>Dissolved</td><td>Oxygen</td><td>(mg/L)</td><td>000</td><td>003</td><td></td><td>┥┟</td><td>4</td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		Dissolved	Oxygen	(mg/L)	000	003		┥┟	4	_							
Operator Telephone Number 705-345-1841 Operator Email Address Idrouin@severn.ca Comments Return completed form to: 1. Environmental Monitoring and Reporting Branch, MECP, at WasteWaterReporting@ontario.ca And 2. Your Environmental Officer at your local District/Area MECP Office. (Find your local MECP office: https:// www.ontario.ca/environment-and-energy/ministry-		Hydrogen	Sulphide	(mg/L)	830	800		┥┝	4	-				$\left\{ \right\}$			
Operator Telephone Number 705-345-1841 Operator Email Address tdrouin@severn.ca Comments Return completed form to: 1. Environmental Monitoring and Reporting Branch, MECP, at WasteWaterReporting@ontario.ca And 2. Your Environmental Officer at your local District/Area MECP Office. (Find your local MECP office: https:// www.ontario.ca/environment-and-energy/ministry-								1 [
30 34 35 38 Operator Telephone Number 705-345-1841 Return completed form to: Operator Email Address 1. Environmental Monitoring and Reporting Branch, MECP, at WasteWaterReporting@ontario.ca And Operator State 2. Your Environmental Officer at your local District/Area MECP Office. (Find your local MECP office: https:// Www.ontario.ca/environment-and-energy/ministry-								┥┝									_
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Operator Telephone Number Return completed form to: 705-345-1841 1. Environmental Monitoring and Reporting Branch, MECP, at WasteWaterReporting@ontario.ca And Operator Email Address 2. Your Environmental Officer at your local District/Area MECP Office. (Find your local MECP office: https:// Comments Www.ontario.ca/environment-and-energy/ministry-					30		34	ļĹ	35	38				ιL			
Operator Email Address In Environmental Monitoring and Reporting Branch, MECP, at WasteWaterReporting@ontario.ca And Operator Email Address VasteWaterReporting@ontario.ca And Comments 2. Your Environmental Officer at your local District/Area MECP Office. (Find your local MECP office: https://www.ontario.ca/environment-and-energy/ministry-	Operator	Telephone	Number				Retu	irn c	om		d for	m to:	Donatio	Ber	nah I		
tdrouin@severn.ca 2. Your Environmental Officer at your local District/Area Comments MECP Office. (Find your local MECP office: https:// www.ontario.ca/environment-and-energy/ministry-	Operator	Email Add	ress			_	·. V	Vaste	eWa	iterRep	portin	g@ontar	io.ca And) Dra	men, f	VIECP,	, al
Comments MECP Office. (Find your local MECP office: https:// www.ontario.ca/environment-and-energy/ministry-	tdrouin@	severn.ca	а				2. Y	our	Envi	ironme	ntal C	Officer at	your local	Disf	rict/Ar	rea	
environment-district-locator)	Commen	ts					N V	NECF	onta	tice. (F rio.ca/ ent-dis	envire	our local	MECP off and-energy	ice: //mii	https:/ nistry-	Ц	



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Project Nar Washago	me Lagoon								
Facility A	ddress								
Unit Numb	er Street Number 1021	Street Name Hurlwood La	ane					PO Box 159	
Municipalit Orillia	y/City/Town		Province ON - Onta	ario				Postal C L3V 6J3	ode
Operating The Corpo	Authority oration of the Township	o of Severn	-						
Mailing A	ddress								
Unit Numb	er Street Number 1021	Street Name Hurlwood La	ane		1			PO Box 159	
Municipalit Orillia	ty/City/Town		Province ON - Ont	ario				Postal C L3V 6J3	ode
File No.	Works Nu	imber *	Mon	Data F	Period * Year		Days	Discharge Type	Update Code
4 6	1 2 0 0 0	2 2 7	3 0	6 2	0 2	3	3 0	2	R 80
	3		10			19	20 21	22	
3 5 F	lour	ſ	Parameter	Code	Dec.	Mo	hthly Results		
12 13 T	Total Flow	(10 ³ m ³)	5001	0	3		3.330		
4	Average Daily Flow	(10 ³ m ³ /d)	5001	5	3		0.111		
	Aaximum Daily Flow	(10 ³ m ³ /d)	5002	0	3				
			30	34	35	38	46		
3 5 E	Bypass				FF .			# of Occ	currences
12 13 F	Plant Bypass Volume	(10 ³ m ³)	5027	0	3	-			
[Duration	(hours)	8168	0 34	35	38			
3 6	Raw Sewage		7.0.4	53	P			# of S	amples
12 13 E	BOD ₅	(mg/L)	0000	1	0		238		1
5	Suspended Solids	(mg/L)	0000	6	0		227		1
1	TKN	(mg/L)	0002	0	2		40.00		1
	Total Phosphorus	(mg/L)	0003	3	1		3.9	49	1
			30	34	3 5	38		48	51
12 13	Final Efflivent Total Efflivent To Wat	ercourse (103 m ³)	5028	0	3				
F	Flow Duration	(hours)	8168	0	1				
	Cell Depth	(m)	5029	0	1				
(CBOD ₅	(mg/L)	0000	2	1				
I	BOD ₅	(mg/L)	0000	11	1				
:	Suspended Solids	(mg/L)	0000	6	1				
	Ammonia + Ammonium	(mg/L)	0001	9	2				
÷.	TKN	(mg/L)	0002	20	2				
	Total Phosphorus	(mg/L)	0003	3	2			L	
			30	34	35	38		48	51
12 13	Disinfection	(ka as Cl ₂)	5032	0		·			
	Chlorine Dosage	(mg/L as Cl ₂)	8041	0	1				
	Chlorine Residual	(mg/L as Cl ₂)	8042	20	1				
			30	34	35	38		48	51
Operator 705-345-	Telephone Number			Return 1. Env	n complexironmen	eted fo tal Moni	rm to: toring and Repo	orting Branch	, MECP, at
Operator	Email Address *				steWater	rReporti nmental	Officer at your	And local District/	Area
Comment	ls			ME	CP Offic	e.	, , .		
				Ministry Peter.	Contact	Email Anhil@o	Address * ntario.ca		



Washag	Name go Lagoor	n												
Facility	Address	8												
Unit Nur	mber	Street Number 1021	Street Nat Hurlwood	me d Lane								PC	9 Box	
Municipa Orillia	ality/City/To	own		Pro	vince I - Onta	ario						Po L3	stal C V 6J	ode 3
Operatin The Co	ng Authority	of the Township	of Severn											
Mailing	Address	1	10											
Unit Nun	mber	Street Number 1021	Street Nat Hurlwood	me I Lane								PC 15	9 Box	
Municipa Orillia	ality/City/To	own		Pro ON	vince I - Onta	ario						Po L3	stal C V 6J	ode 3
File No.		Works Nur	nber *		Mon	Da th	ta Perio Y	d * ear		Days	Dis	cha ype	ge	Update Code
4 6	1	2 0 0 0	2 2 7	3	0	6	2 0	2	3	3 0		2		R 80
C.P.]													
3 6	Raw Sew	vage		Param	neter Co	ode	Dec	Mo	nthly	Average	Results	#	# of	Samples
12 13													_	
						_	_	-						
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						_								
				30		34	35	38						
30		ient		Param	neter Co	ab	Dec	Mo	othly	Average	Populto	B	# of	Samplas
12 13	Alkalinity	Total	(ma/L)	0	0051		4		inuny	Average	Results	1	# 01	Samples
	Conductiv	vity 25°C	(IIIS/cm)	9	1004	_	4	-					_	
	E. Coli		(CT/100ml)	9	1000	_	4		1.12.1					
	Nitrate, U	nfiltered reactive	(mg/L)	0	0022	-	4	-						
	Nitrite, Ur	filtered reactive	(mg/L)	0	0021	-	4	-					-	
	pH		(8	0770	_	4	-						
	Temperat	ure, Water	(°C)	8	0250	_	4						-	
	Un-ionize	d Ammonia	(mg/L)	9	1012		4							
	Dissolved	Oxygen	(mg/L)	0	0003		4							
	Hydrogen	Sulphide	(mg/L)	8	3008		4							
				30		34	35	38						
Operator 705-345	Telephon 5-1841	e Number			R 1	etu . E	nvironm	pleted ental M	onito	n to: ring and f	Reporting	g Bra	anch,	MECP, at
Operator	Email Add	dress				M	asteWa	terRep	orting	(@ontario	.ca And			ð
Commen	nts	2			$- ^2$. Y	ECP Of	fice. (Fi	nd vo	micer at y our local M	OUT IOCAL	Dis ice:	https://	
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Fields mar	ked with	an asterisk (*) are	e mandatory.							
Project Na	me									
Washago	Lagoon									
Facility A	Address	Street Number	Street Name						PO Box	
		1021	Hurlwood La	ane					159	
Municipali	ty/City/To	wn	1	Province					Postal C	Code
Orillia				ON - Onta	ario				L3V 6J	3
Operating The Corp	Authority oration of	of the Township	of Severn							
Mailing A	Address								3	
Unit Numb	ber	Street Number 1021	Street Name Hurlwood L	ane					PO Box 159	
Municipali	ty/City/To	wn		Province					Postal (Code
Orillia				ON - Onta	ario				L3V 03	
File No.		Works Nu	mber *	Mon	Data	Period *		Days	Discharge	Code
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4 6		2 0 0 0	2 2 7	3 0 11 16	1 2	02	19	20 21	22	80
	-									
C.P.				-	0				1	
3 5	Flows			Parameter	Code	PUec.	Mor	itnly Results		
12 13 -	Total Flov	v	(10 ³ m ³)	50010	0	3		4.820		
	Average [Daily Flow	(10 ³ m ³ /d)	5001	5	3		0.160		
1	Maximum	Daily Flow	(10 ³ m ³ /d)	50020	0	3				
				30	34	35	38	46) [#of Oo	ourroncor
3 5	Bypass	-		5007		F	-		1 #0100	currences
12 13	Plant Byp	ass Volume	(10 ³ m ³)	50270	0	3				
).	Duration		(hours)	8168	34	35	38		J	
2 6				50	54	p ĩ	Ĩ		# of \$	Samples
12 13	Raw Sew	age	(mg/L)	0000	1			123	ייין ו	1
	Suspende	ed Solide	(mg/L)	0000	6	0		120		1
	ткы		(mg/L)	0002	0	2		30.00		1
	Total Pho	soborus	(mg/L)	0003	3	1		2.7		1
	rotarr ne	apriorus -	(9.=)	30	34	35	38		48	51
3 9	Final Eff	luent				P .	P		_	
12 13	Total Effl.	. Volume To Wate	ercourse (103 m ³)	5028	0	3				
	Flow Dur	ation	(hours)	8168	0	1				
	Cell Dept	h	(m)	5029	0	1				
	CBOD ₅		(mg/L)	0000	2	1				
	BOD ₅		(mg/L)	0000	1	1				
	Suspend	ed Solids	(mg/L)	0000	6	1				
	Ammonia	a + Ammonium	(mg/L)	0001	9	2				
	TKN		(mg/L)	0002	0	2				
	Total Pho	osphorus	(mg/L)	0003	3	2				
				30	34	35	38		48	51
0 9	Disinfec	tion			-		-		٦.	
12 13	Chlorine	Used	(kg as Cl ₂)	5032	20				-	
	Chlorine	Dosage	(mg/L as Cl ₂)	8041	0				-]
	Chlorine	Residual	(mg/L as Cl ₂)	8042	24	35	38		48	51
0	Talash	a blumber		50	Return	n compl	eted fo	rm to:		30
705-345	-1841	ne Number			1. En	vironmen	ital Moni	toring and Rep	orting Branc	h, MECP, at
Operator	Email Ac	Idress *			Wa	steWate	rReporti	ng@ontario.ca	And	
tdrouin@	gsevern.	са			2. You	ur Enviro	nmental	Officer at your	r local Distric	VArea
Commen	nts				Ministr	y Contac	t Email A	ddress *		
					Peter.	Vreugde	nhil@o	ntario.ca		4



Project N Washag	Name go Lagoor	1															
Facility	Address	i														_	
Unit Nun	nber	Street Number 1021	Street Nat Hurlwood	me d Lane										PO	Box		
Municipa Orillia	ality/City/To	own		Prov	/ince - On	tario)							Pos L3	tal C	ode	
Operatin The Cor	g Authority	of the Township	of Severn														
Mailing	Address										e e 402.5						
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me 1 Lane										PO	Box		
Municipa Orillia	ality/City/To	own		Prov ON	- On	taric)							Pos L3	tal Co	ode	
File No.		Works Nur	nber *		Mo	D	ata I	Perio Y	d * ear		Da	iys	Disc	char	ge	Up	odate ode
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C.P.				-			-							1 190			
3 6 12 13	Raw Sew	age		Parame	eter C	ode	- *	Dec		Month	ly Aver	age R	esults		# of	Sam	ples
	Temp	2					-	\vdash						┥┝			
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	L			30		3	34	35	38	1				i L			
3 9	Final Efflu	ient		Parame	eter C	ode	ן 🖡	Dec	# ,	Month	ly Avera	age Re	esults	P	# of	Sam	ples
12 13	Alkalinity,	Total	(mg/L)	00	051			4									
	Conductiv	ity 25°C	(µS/cm)	91	004			4									
	E. Coli		(CT/100ml)	91	000		4	4									
	Nitrate, U	filtered reactive	(mg/L)	00	022			4									
	pH	initered reactive	(mg/c)	80	770		-	4	\vdash					-	_		
	Temperat	ure, Water	(°C)	80	250			4	-								
	Un-ionized	d Ammonia	(mg/L)	91	012		1	4									
	Dissolved	Oxygen	(mg/L)	00	003			4									
	Hydrogen	Sulphide	(mg/L)	83	800			4									
									-					-			
							+	_	\vdash					ŀ			
							1		H								
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		122 120		30		3	4	35	38		8			Ľ			
Operator 705-345	Telephone -1841	e Number				Ret 1.	urn Envi	ronm	ental	ed fo Monit	rm to: toring a	nd Re	porting	Bra	nch, I	MEC	P, at
Operator tdrouin@	Email Add	lress a				2.	vvas Your	teWa Envi	ironm	eportir nental	ng@ont Officer	ario.ca at vou	a And	Dist	rict/A	rea	
Commen	its					1	MEC	P Of	fice	(Find) a/envi	your loc	al ME	CP offi energy	ce: //min	https:/	1	
						6	envir	onme	ent-d	istrict-	locator	1					



Fields ma	arked with	an asterisk (*) are	mandatory.								
Project N Washag	ame o Lagoon										
Facility	Address										
Unit Num	iber	Street Number 1021	Street Name Hurlwood La	ane						PO Box 159	
Municipa Orillia	lity/City/To	bwn		Province ON - Onta	ario					Postal C L3V 6J3	ode
Operating The Cor	g Authority	of the Township	of Severn								
Mailing	Address		7605								
Unit Num	nber	Street Number 1021	Street Name Hurlwood La	ane						PO Box 159	
Municipa Orillia	lity/City/To	own		Province ON - Ont	ario					Postal C L3V 6J3	ode 3
File No.		Works Nur	nber *	Mor	Data I	Period * Year		Days	Dis	charge Type	Update Code
4 6	1	2 0 0 0	2 2 7	3 0	8 2	0 2	3	3 1	Г	2	R 80
1 2	3			1 10			15	20 21			
C.P.			r		<u> </u>				٦		
3 5	Flows			Parameter	Code	Dec.	Mor	itnly Results	_		
12 13	Total Flow	N	(10 ³ m ³)	5001	0	3		3.20	8		
	Average	Daily Flow	(10 ³ m ³ /d)	5001	5	3		0.10	3		
	Maximum	Daily Flow	(10 ³ m ³ /d)	5002	0	3	20		46		
3 5	Bynass			50	34	# 1	pĭ		-0	# of Occ	currences
12 13	Plant Byp	oass Volume	(10 ³ m ³)	5027	0	3					
	Duration		(hours)	8168	0	1					
	1			30	34	35	38			# of S	amples
3 6	Raw Sev	vage	(ma/L)	0000	1		- 	32	a	#010	1
	Suspand	ed Solids	(mg/L)	0000	6	0		24	9		1
	ткы	eu oonus	(mg/L)	0002	0	2		31.6	0		1
	Total Pho	osphorus	(mg/L)	0003	3	1	-	3.	7		1
	_			30	34	35	38			48	51
3 9	Final Eff	luent					P		-		
12 13	Total Effl	. Volume To Wate	ercourse (103 m ³)	5028	0	3			_		
	Flow Dur	ration	(hours)	8168	0	1	-		-		
	Cell Dep	th	(m) (ma/l.)	5029	0	1			-		
			(mg/L)	0000	1	1			-		
	Suspend	led Solids	(mg/L)	0000	6	1			-		
	Ammoni	a + Ammonium	(mg/L)	0001	9	2			-		
	TKN		(mg/L)	0002	0	2					
	Total Ph	osphorus	(mg/L)	0003	3	2					
201-1-02	, ota, i ii	copileide	(··· 3 ·-/	30	34	35	38			48	51
0 9	Disinfec	tion					P		_		
12 13	Chlorine	Used	(kg as Cl ₂)	5032	20	1			_		
	Chlorine	Dosage	(mg/L as Cl ₂)	8041	0	1			_		
	Chlorine	Residual	(mg/L as Cl ₂)	8042	20		38			48	51
Operato	r Telenho	ne Number		50	Retur	n comple	eted fo	rm to:			
705-34	5-1841				1. En	vironment	tal Moni	toring and Re	eporti	ng Branch	, MECP, at
Operato	@severn	ddress *			2. Yo	ur Enviror	nmental	Officer at yo	a An ur loc	al District/	Area
Comme	ints				ME	CP Office	ə.				
					Ministr Peter.	y Contact Vreugde	Email A nhil@o	ntario.ca			F



Project N Washag	Name go Lagoon											
Facility	Address											
Unit Nun	nber	Street Number 1021	Street Nat Hurlwood	me I Lane						PO B 159	ox	
Municipa Orillia	ality/City/To	wn		Provi ON -	nce Ontario					Posta	I Cod 6J3	е
Operatin The Cor	ng Authority	of the Township	of Severn									
Mailing	Address											
Unit Nun	nber	Street Number 1021	Street Nat Hurlwood	me I Lane						PO B 159	ox	
Municipa Orillia	ality/City/To	wn		Provir ON -	nce Ontario	1				Posta	I Cod	е
File No.		Works Num	nber *		Di	ata Perio	od *	Days	Disc	harge		Update
4 6] 1 :	2 0 0 0	2 2 7	3	0 8	2 0	2 3	3 1		2		R
1 2	3 7			11	16		19	20 21	2	2		80
C.P.	Bau Sour	200		Daramat	or Codo		Month	hi Augreen D	a sulta	N .		
12 13	Naw Sewa	19C		Faramet	er coue			ily Average R	esuits	#	01 38	impies
						$\downarrow \vdash$						
						┥┝──	┥┝───	9				
										-		
				30	3	4 35	38			L	_	
		ant		Decement	as Cada		1			8		
12 13	Alkalinity	Total	(ma/l.)	Paramet		Tuec		ly Average R	esuits	#	01 58	imples
	Conductiv	Total	(mg/L)	000	04	4	┥┝──			-		
	E Coli	ly 25 C	(µ5/cm)	910	004	4						
	E. COII	filtered reactive	(C1/100mi)	910	000	4				-		
	Nitrite, Un	Sitered reactive	(mg/L)	000	22	4				-		
		intered reactive	(mg/L)	000	70	4	┥┝───			-		
	Temperati	Iro Mator	(°C)	807	70	4						
			(0)	002	12	4						
	Dissolved		(mg/L)	910	03	4				\vdash		
	Hydrogen	Sulphide	(mg/L)	830	103	4				-		
	injulogen	Calpinde	(iiig/c)	000	.00					-		
	1											
						┨				-	-	
						┨ ┝──						
				30	34	35	38					
Operator	Telephone	Number			Retu	irn con	npleted fo	rm to:	nortica	Bran		
Operator	Email Add	ress			'' \	VasteW	aterReporti	ng@ontario.c	a And	Branc	an, ivit	LOP, at
tdrouin@	evern.ca	a			2.	our Env	vironmental	Officer at you	ur local l	Distric	t/Are:	a
Commen	its				- N	AECP O	ffice. (Find	your local ME	CP offic	e: htt	ps://	ā
					E E	www.ont	ario.ca/envi ent-district-	ronment-and	-energy/	minist	try-	



Fields ma	arked with	an asterisk (*) are	e mandatory.									
Project N	ame											
Washag	o Lagoon											
Facility	Address	Street Number	Street Name								PO Box	
OniciNun	ibei	1021	Hurlwood La	ane							159	
Municipa Orillia	lity/City/To	bwn		Province ON - Onta	ario						Postal C L3V 6J3	ode 3
Operatin	g Authority											
The Cor	poration of	of the Township	of Severn		_							
Mailing	Address		low-theme									
Unit Nur	nber	1021	Hurlwood La	ane							159	
Municipa Orillia	llity/City/To	nwo		ON - Onta	ario						L3V 6J	3
File No.		Works Nu	mber *	Mon	Da hth	ata P	eriod * Year		Days	Di	scharge Type	Update Code
4 6	1	2 0 0 0	2 2 7 3	3 0	9	2	0 2	2 3	3 0		2	R
1 2	3		1	1 16				19	20 21		22	80
C.P.						_		-		_		
3 5	Flows			Parameter	Coc	de	PDec.	Mo	nthly Results	5		
12 13	Total Flov	v	(10 ³ m ³)	50010	0		3		3.0	58		
	Average I	Daily Flow	(10 ³ m ³ /d)	5001	5		3		0.1	02		
	Maximum	Daily Flow	(10 ³ m ³ /d)	50020	0		3					
	1		3	30		34	35	38		46	# of Oo	aurrances.
3 5	Bypass		(102	5007	0	_		- -			# 01 000	currences
12 13	Plant Byp	ass volume	(103 m3)	50270	0	_	3	-		-		
	Duration		(nours)	30	0	34	35	38				
3 6	Raw Sev	vaqe						p i			# of S	amples
12 13	BOD ₅	lugo	(mg/L)	0000	1		0		1	63		1
	Suspende	ed Solids	(mg/L)	0000	6		0		1	91		1
	TKN		(mg/L)	0002	0		2		39.	80		1
	Total Pho	osphorus	(mg/L)	0003	3		1		4	4.0		1
	-			30		34	35	38		- 225	48	51
3 9	Final Eff	luent		5000	0	_	- -	•		_		
12 13	Total Eff	. Volume To Wate	ercourse (10 ³ m ³)	5028	0	_	3			_		
	Flow Dur	ation	(nours)	8168	0	_	1	-		_		
	Cell Dep	th	(m) (ms/l.)	5029	0	_				_		
			(mg/L)	0000	1		1	-		-		
	BUD5	ad Calida	(mg/L)	0000	6	_	1	-		-		
	Suspend	eu Solius	(mg/L)	0000	a		2			_		
		a + Ammonium	(mg/L)	0001	0	_	2			_		
	Tetel Dh	aabarus	(mg/L)	0002	3	-	2			-		
	Total Phi	osphorus	(mg/c)	30		34	35	38			48	51
0 9	Disinfec	tion					P	p				
12 13	Chlorine	Used	(kg as Cl ₂)	5032	20		1					
	Chlorine	Dosage	(mg/L as Cl ₂)	8041	0		1					
	Chlorine	Residual	(mg/L as Cl ₂)	8042	20		1					
				30		34	35	38			48	51
Operato	Telephon	ne Number			Re	Env	comp	ntal Mon	itoring and F	Report	ting Branch	. MECP. at
705-34 Operate	or Email Ar	Idross *			1.	Was	steWate	rReport	ing@ontario	.ca Ai	nd	
tdrouin	@severn.	ca			2.	You		nmenta	Officer at y	our lo	cal District	/Area
Comme	ents				Min	ME(Contac	æ. t Email	Address *			
					Pe	ter.V	/reugde	enhil@c	ontario.ca			



Project N Washag	Name 30 Lagoor	n															
Facility	Address	•															
Unit Nun	nber	Street Number 1021	Street Nat Hurlwood	me d Lane										P(D Box 59	x	
Municipa Orillia	ality/City/To	nwo		Pro	ovince N - Or	tario	0							Po	ostal 3V 6.	Cod J3	e
Operatin The Cor	g Authority	of the Township	of Severn														
Mailing	Address	1															
Unit Num	nber	Street Number 1021	Street Nar Hurlwood	me d Lane										PC 15) Box	×	
Municipa Orillia	ality/City/To	nwo		Pro	ovince N - On	tario	D							Po	ostal 3V 6,	Cod J3	e
File No.		Works Nu	mber *		Mo	C onth	Data I	Perio	d * ear			Days	Dis	scha Typ	irge e	ſ	Update Code
4 6	1	2 0 0 0	2 2 7	3	0	9	2	0	2	3		3 0		2	Γ		R
1 2	3			11	16	-				19		20 21	1	22			80
C.P.								M	-						<u>.</u>		
3 6	Raw Sew	age		Paran	neter (Code		Dec	1	Mont	hly .	Average	Results	₽	# 0	of Sa	amples
12 10							-		ł		-			-	<u> </u>	-	
							-		ł					1			
									ŀ					1			
									E]			
									ŀ						1		
				-			-	\vdash	-					-	_		
				30			34	35	3	8				L		-	
3 9	Final Efflu	lent		Paran	neter (Code		Dec		Month	nly .	Average	Results	ן ₽	#0	of Sa	mples
12 13	Alkalinity,	Total	(mg/L)	C	00051			4	E					1			
	Conductiv	vity 25°C	(µS/cm)	9	91004			4									
	E. Coli	- Ellene d'an e alline	(CT/100ml)	9	91000		_	4	╞								
	Nitrite Lin	filtered reactive	(mg/L)		00022		-	4	ŀ		-				<u> </u>		
	pH		(119/2)	8	30770		-	4	ŀ					1			
	Temperat	ure, Water	(°C)	8	30250		1	4	F		-			1			
	Un-ionize	d Ammonia	(mg/L)	9	91012			4						1			
	Dissolved	Oxygen	(mg/L)	C	00003			4									
	Hydrogen	Sulphide	(mg/L)	8	33008		_	4	ŀ								
							-	-	ŀ						<u> </u>		
						7	-		ŀ						-		
									F					1			
									F					1			
	.			30			34	35	3	3						-	
705-345	-1841	e Number				net 1.	Envi	ronm	enta	I Mon	itor	ing and f	Reportin	g Br	anch	, ME	ECP, at
Operator tdrouin@	Email Add	a				2	Your	Fovi	ron	nenta		gontario		ייםו	strict/	Are	,
Commen	ts						MEC	P Of	fice.	(Find	yo	ur local M	MECP of id-energ	fice:	http	<u>s://</u> y_	
							envir	ronme	ent-	district	-100	cator)					



Fields man	rked with	an asterisk (*) are	e mandatory.									
Project Na	me											
Vvasnago	Advoce											
Unit Numb	ber	Street Number	Street Name	ane							PO Box	
Municipali	ty/City/To	wn	Turiwood E	Province	ario						Postal C	ode
Onina	Authority			UN - UN	ano						200 000	
The Corp	oration o	of the Township	of Severn									
Mailing A	Address	Street Number	Street Name								PO Box	
Unit Nume	Jei	1021	Hurlwood La	ane							159	
Municipali Orillia	ity/City/To	wn		Province ON - Ont	tario						Postal C L3V 6J	ode 3
File No.		Works Nur	nber *		Da	ata P	Period *		Days	Di	scharge	Update
4 6	1	2 0 0 0	2 2 7	3 1	0	2	0 2	3	3 1		2	R
1 2	3		1	1 16				19	20 21		22	80
C.P.												
3 5	Flows		[Parameter	r Cod	le	Dec.	Mo	nthly Results	5		
12 13	Total Flow	v	(10 ³ m ³)	5001	0		3		3.6	21		
	Average [Daily Flow	(10 ³ m ³ /d)	5001	5		3		0.1	16		
1	Maximum	Daily Flow	(10 ³ m ³ /d)	5002	20		3					
				30		34	35	38		46	# ={ 0=	urraneos
3 5	Bypass		(103 m3)	5027	70	-	-				# 01 000	unences
12 10	Plant Byp	ass volume	(10° ms)	8168	20	-	1			-		
2 	Duration		(nours)	30		34	35	38				
3 6	Raw Sew	age				_	P	P		_	# of S	amples
12 13	BOD ₅		(mg/L)	0000)1		0		1	65		1
	Suspende	ed Solids	(mg/L)	0000)6	_	0			73		1
1	TKN		(mg/L)	0002	20	_	2	-	23.	20		1
12	Total Pho	sphorus	(mg/L)	0003	33	34	35	38	4		48	51
3 9	Final Eff	luent		50		54	P	p ĩ				
12 13	Total Effl.	Volume To Wate	ercourse (103 m3)	5028	30		3					
	Flow Dura	ation	(hours)	8168	30		1	1				
	Cell Dept	h	(m)	5029	90		1					
	CBOD ₅		(mg/L)	0000	02		1	0				
	BOD ₅		(mg/L)	0000	D1		1					
	Suspende	ed Solids	(mg/L)	0000	06	_	1			_	L	
	Ammonia	a + Ammonium	(mg/L)	000	19	_	2	-		_		
	TKN	12	(mg/L)	0002	20	_	2			_		
	Total Pho	osphorus	(mg/L)	30	33	34	35	38			48	51
0 9	Disinfect	tion										
12 13	Chlorine	Used	(kg as Cl ₂)	5033	20		1					
	Chlorine	Dosage	(mg/L as Cl ₂)	804	10		1					
	Chlorine	Residual	(mg/L as Cl ₂)	804:	20		1					
				30		34	35	38			48	51
Operator 705-345	Telephor -1841	ne Number			1.	Env	ironmer	ital Mon	itoring and F	Report	ing Branch	, MECP, at
Operator	Email Ad	Idress *			2	Was	steWate	rReport	Officer at w	ca Ar	id cal District	Area
tdrouin@	vsevern.	са			2.	ME	CP Offic	e.	Onicer at y	001 10		
Commen	1.5				Min Pet	istry ter.V	Contac /reugde	t Email /	Address * intario.ca			



Project N Washag	Name 30 Lagoon																	
Facility	Address																	-
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me I Lane										PC 15) Bo	x		
Municipa Orillia	ality/City/To	wn		Prov	ince	tario								Po L3	stal	Coc J3	le	-
Operatin The Cor	g Authority	of the Township	of Severn															
Mailing	Address																	-
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me I Lane										PC 15) Bo 9	x		
Municipa Orillia	ality/City/To	wn		Prov ON	ince - Ont	tario	í							Po L3	stal	Cod J3	le	
File No.		Works Nur	nber *		Mor	D	ata F	Perio Y	d * ear		Da	iys	Disc	cha ype	rge e		Update Code	9
4 6	1 2	2 0 0 0	2 2 7	3	1	0	2	0	2	3 19	3	1		2	Γ		R 80	
CP	1								010000									
3 6	Raw Sewa	200		Parama	tor C	odo	۱ 🛙	hee		lonthl			oculto	1 2	#	of C	malaa	2
12 13		.gc		Tarame		oue	1	Dec	T		Avera	iye K	esuits	רן	#	1.20	ampies	ž.
							1		-									
																		-
							1											-
			*															
																		_
				30		3	4	35	38									
3 9	Final Efflue	ent	1	Parame	ter C	ode	1	Dec		lonthh		no P	oculte	Ê	#,	of Cr	moloc	l
12 13	Alkalinity.	Total	(ma/L)	00	051		1.	4	-	ionung	Avera	ige it	esuits	Г	#0	1 30	ampies	
	Conductivi	ty 25°C	(µS/cm)	91	004			4	-									-
	E. Coli		(CT/100ml)	910	000			4										-
	Nitrate, Un	filtered reactive	(mg/L)	000	022		1	4										_
	Nitrite, Unf	filtered reactive	(mg/L)	000	021		11	4										-
	рН			80	770			4										
	Temperatu	ire, Water	(°C)	802	250			4										
	Un-ionized	Ammonia	(mg/L)	910	012			4										
	Dissolved	Oxygen	(mg/L)	000	003			4										
	Hydrogen	Sulphide	(mg/L)	830	800	_	┤╎	4										
							┥╽		-							_		-
						_	1								_			-
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						-		-	-					ł				-
l			3	30		34	ļ	35	38					L				1
Operator 705-345	Telephone -1841	Number				Retu 1. E	i rn Envir	com onm	plete ental l	d for Monito	m to: pring a	nd Re	porting	Bra	anch	i, ME	ECP, at	
Operator tdrouin@	Email Addr	ress			7.	, ,	Vast	End	terRe	portin	g@ont	ario.c	a And		1 mi - 1	A		
Commen	ts				ť	. N	NEC	POf	fice. (I	Find y	our loc	al ME	CP offi	ice:	http	Area s://	1	
						V E	nvir	onta	no.ca	/envir	onmen	-and-	energy	/mi	nistr	¥-		



Fields ma	arked with	an asterisk (*) are	e mandatory.							
Project N	lame									
Facility	Address									
Unit Num	nber	Street Number	Street Name						PO Box	
		1021	Hurlwood L	ane					159	
Municipa Orillia	lity/City/To	own	3	Province ON - Ont	ario				Postal C L3V 6J	ode 3
Operating The Cor	g Authority poration of	of the Township	of Severn							
Mailing	Address								9	
Unit Num	nber	Street Number 1021	Street Name Hurlwood L	ane					PO Box 159	
Municipa Orillia	lity/City/To	own		Province ON - Ont	tario				Postal C L3V 6J	ode 3
File No.		Works Nur	nber *	Mor	Data	Period * Year		Days	Discharge Type	Update Code
4 6	1	2 0 0 0	2 2 7	3 1	1 2	0 2	2 3	3 0	2	R 80
1 2	3 1			11 10			10	20 21		
C.P.				Barrata	Orde			athly Decylta		
3 5	Flows			Parameter	Code	PUec.				
12 13	Total Flov	v	(10 ³ m ³)	5001	0	3		2.972		
	Average I	Daily Flow	(10 ³ m ³ /d)	5001	5	3		0.099		
	Maximum	Daily Flow	(10 ³ m ³ /d)	5002	0 34	3	38	46		
3 5	Bunass			50	54	Ĩ	p	40	# of Oc	currences
12 13	Plant Byp	ass Volume	(10 ³ m ³)	5027	0	3				
	Duration		(hours)	8168	0	1			L	
	•		2	30	34	35	38			
3 6	Raw Sew	/age					P		# of S	Samples
12 13	BOD ₅		(mg/L)	0000	11	0		98		1
	Suspende	ed Solids	(mg/L)	0000	6	0		139		1
	TKN		(mg/L)	0002	20	2		22.20	-	1
	Total Pho	sphorus	(mg/L)	30	34	35	38	2.0	48	51
3 9	Final Eff	luent				P	#			
12 13	Total Effl.	Volume To Wate	rcourse (103 m ³)	5028	0	3				
	Flow Dur	ation	(hours)	8168	80	1				
	Cell Dept	h	(m)	5029	0	1				
	CBOD ₅		(mg/L)	0000)2	1				
	BOD ₅		(mg/L)	0000)1	1		17.6		3
	Suspende	ed Solids	(mg/L)	0000)6	1		13.0		3
	Ammonia	a + Ammonium	(mg/L)	0001	19	2		0.20		3
	TKN		(mg/L)	0002	20	2		1.63		3
	Total Pho	osphorus	(mg/L)	0003	33	2	38	0.07	48	51
0 9	Disinfect	tion		50	0	Ĩ	pĩ			
12 13	Chlorine	Used	(kg as Cl ₂)	5032	20	1				
	Chlorine	Dosage	(mg/L as Cl ₂)	8041	10	1				
	Chlorine	Residual	(mg/L as Cl ₂)	8042	20	1				
				30	34	4 35	38		48	51
Operato 705-34	r Telephor 5-1841	ne Number			1. En	n compl vironmen	eted fo	toring and Repo	orting Branch	n, MECP, at
Operato	r Email Ad	dress *			2 10	ur Enviro	nmental	Officer at your	local District	/Area
Comme	nts	ud			ME	ECP Offic	e.			
					Ministr Peter.	y Contact Vreugde	t Email A nhil@o	Address * ntario.ca		



Project N Washag	lame 30 Lagoor	n																	
Facility	Address	•																	_
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me 1 Lan	е										PO	Box 9	¢		
Municipa Orillia	ality/City/To	own		F	Provinc	e Intari	io		0.000000						Po:	stal (V 6J	Code J3	e	
Operatin The Cor	g Authority	of the Township	of Severn																
Mailing	Address																		
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	me d Lan	е										PO	Box 9	C		
Municipa Orillia	ality/City/To	own		F	Provinc ON - C	e Intari	io								Po:	stal (V 6J	Code I3	e	
File No.		Works Num	iber *] [_	l Ionth	Data	Perio Y	d * ear			Days		Discl Ty	har /pe	ge	Γ	Updat Code	e
4 6	1	2 0 0 0	2 2 7	3	1	1	2	2 0	2	3		3 0)		2		_	R	
1 2	3			11	16		_		_	19		20 2		2	22			80	5
C.P.																			
3 6	Raw Sew	age		Par	ameter	Cod	е	Dec		Month	nly A	verage	Resu	lts	P	# o	f Sa	mples	5
12 13															Ī				
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	L			30			34	35		8					L				
3 9	Final Efflu	ient	1	Par	ameter	Cod	P	Dec		Month		verage	Resu	lts	Đ	#0	f Sa	mnles	
12 13	Alkalinity.	Total	(ma/L)		0005	1	-	4	-	morna		1 teruge	14 00	000		#0	100	mpice	3
	Conductiv	vity 25°C	(µS/cm)		9100	4	-	4							ŀ				-
	E. Coli		(CT/100ml)		9100	0		4					-	-	ŀ		-		-
	Nitrate, U	nfiltered reactive	(mg/L)		0002	2		4							ł				-
	Nitrite, Un	filtered reactive	(mg/L)		0002	1		4			0.000	0.000			t				1
	рН				8077	0		4					8.10	000	Ī				3
	Temperat	ure, Water	(°C)		8025	0		4					10.50	000	Ī				3
	Un-ionize	d Ammonia	(mg/L)		9101	2		4											
	Dissolved	Oxygen	(mg/L)		0000	3		4											
	Hydrogen	Sulphide	(mg/L)		8300	8		4											
						-00800	_							_					_
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Operator	Telephone	e Number				Re	tur	n com	ple	ted fo	orm	to:	Popor	ting	Dre	neb	мс		
Operator	Email Add	tress				-1"	Wa	steWa	aterF	Reporti	ing@	ontari	o.ca A	nd	Ulc	in iCH,	, wic	.or, a	i.
tdrouin@	evern.c	a				2.	Yo	ur Envi	iron	nental	Offi	cer at	your lo	ocal [Dist	trict/	Area	I I	
Commen	Its						ME	CP Of	fice.	(Find	you	r local	MECP	P offic	ce:	https	<u>s://</u>		
							env	ironm	ent-	district	-loca	ator)		- 9J		10(1)	-		



Fields m	arked with	an asterisk (*) are r	mandatory.										
Project N Washag	lame Jo Lagoon												
Facility	Address	Caracter and the Ma										1	
Unit Nun	nber	Street Number 1021	Street Name Hurlwood L	ane								PO Box 159	
Municipa Orillia	ality/City/To	wn		Provin ON - 0	onta	rio						Postal Co L3V 6J3	ode
Operatin The Cor	g Authority	of the Township of	f Severn										
Mailing	Address											0.	
Unit Nur	nber	Street Number 1021	Street Name Hurlwood L	ane								PO Box 159	
Municipa Orillia	ality/City/To	wn		Provin ON -	nce Onta	rio			¥);			Postal Co L3V 6J3	ode
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12 13	Total Flov	v	(10 ³ m ³)	50	0010		3			4,952			
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	Maximum	Daily Flow	(103 m3/d)	50	0010		3			0.100	-		
	Maximum	Dally Flow	(105 115/0)	30	0020	34	35	38		4	6		
3 5	Bynass											# of Occ	urrences
12 13	Plant Byp	ass Volume	(10 ³ m ³)	50	0270		3				1	-	
	Duration		(hours)	8	1680	6	1				1		
				30		34	35	_38			1		
3 6	Raw Sew	age					P	P				# of Sa	amples
12 13	BOD ₅		(mg/L)	00	0001		0			140			1
	Suspende	ed Solids	(mg/L)	00	0006		0			177			1
	TKN		(mg/L)	00	0020		2			17.30			1
	Total Pho	sphorus	(mg/L)	00	0033		1			2.0)		1
				30		34	35	38			-	48	51
3 9	Final Effl	uent					PE				-		
12 13	Total Effl.	Volume To Watero	ourse (103 m3)	5	0280		3			36.894	1		
	Flow Dura	ation	(hours)	8	1680		1			192.0	2		
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	BOD ₅		(mg/L)	0	0001	l.	1			26.0)		3
	Suspende	ed Solids	(mg/L)	0	0006	6	1			21.0)		3
	Ammonia	+ Ammonium	(mg/L)	0	0019)	2			0.46	5		3
	TKN		(mg/L)	0	0020)	2			2.10)		3
	Total Pho	sphorus	(mg/L)	0	0033	5	2			0.04	1		3
	-			30		34	35	38				48	51
0 9	Disinfect	lion									7		
12 13	Chlorine	Used	(kg as Cl ₂)	5	0320)	1	$ \vdash$			4		
	Chlorine	Dosage	(mg/L as Cl ₂)	8	0410)	1				4		
	Chlorine	Residual	(mg/L as Cl ₂)	8	0420)	1						
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tdrouin	@severn.	ca			1	2. You	ır Envir	onmen	tal Offi	icer at your	loc	al District/A	Area
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593	32												



Project N Washag	lame Jo Lagoon															
Facility	Address															_
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	ne Lane									PO	Box 9		
Municipa Orillia	lity/City/To	wn		Provin ON - (ce Onta	ario							Pos L3	stal Co	ode	
Operatin The Cor	g Authority poration of	of the Township of	of Severn													
Mailing	Address															
Unit Nun	nber	Street Number 1021	Street Nar Hurlwood	ne Lane				_					PO 159	Box		
Municipa Orillia	lity/City/To	own		Provin ON - (ce Onta	ario	= =						Pos L3	tal Co / 6J3	de	_
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3 6	Raw Sewa	age		Paramete	er Co	de	be	ec	Mo	onthly	Average	Results		# of \$	Samples	3
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			:	30		34	3	5	38							
3 9	Final Efflu	lent		Paramete	r Co	de	Poe	ec	Mo	onthly	Average	Results		# of \$	Samples	;
12 13	Alkalinity,	Total	(mg/L)	0005	51		4	4			1	04.0000				3
	Conductiv	rity 25°C	(µS/cm)	9100	04	_	4	4								_
	Nitrate, U	nfiltered reactive	(ma/L)	0002	22			4	-							-
	Nitrite, Un	filtered reactive	(mg/L)	0002	21	-	4	4								-
	рН			8077	70		4	4				7.7800				3
	Temperat	ure, Water	(°C)	8025	50		4	4				5.0000				3
	Un-ionized	d Ammonia	(mg/L)	9101	12		4	4				0.0050				3
	Hydrogen	Sulphide	(mg/L)	8300)3)8	_		4	-	_						-
	- yarogen	Calpinac	(119/2)	0000		_		-	-							-
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Operator 705-345	Telephone -1841	e Number			F 1	Retu . E	rn co nviroi	om nm	pletec ental M	l for Ionito	m to: pring and	Reporting) Bra	unch, ľ	MECP, a	at
Operator tdrouin@	Email Add	lress			2	<u>v</u>	/aste	Wa	iterRep	orting	Contario	o.ca And	Dist	rict/A	rea	
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Appendix C

Sewage Pump Station Draw Down Tests

Pump Drawdown Test Results at Pumping Station #1 in Washago

Completed: April 20/2023 Performed By Silos Smith

Data:

Influent

Influent testing completed immediately before and after each trial for the pump drawdown. The increase in waste collected from an initial starting point over a 1 minute period. Results shown are in inches.

Drawdown

Drawdown testing was completed by measuring the drop of waste from an initial starting point over a 1 minute period. Results shown are in inches.

	Trial		Influent	1		Drawdowi	n
	No.	Initial	Final	Result	Initial	Final	Result
Pump 1		0.53	0,57	0,04	0,576	6.39	0,17
	2	0,55	0.58	0.03	0.60	0,47.	0. +613
	3	0,58	0,560	n.02.	0.60	0,218	0.12
Pump 2	1	0,54	0.56	0.02	0.59	0,46.	0.13
	Ż	0,56	0.58.	0,02	0,60.	0,42.	0.18.
	3	0,54	0.57	0.03	0.59	0.44	0.15

Volume Calculations:

V = $\pi r^2 h$, where r = 1.2 m and h = <u>drawdown result (inches) x 0.0254 m/inch</u> 1 minute

> = 4.5216 h x <u>1000 litres</u> 60 seconds = (1.914144) x result (inches)

Pump Capacity:

Vtotal = Vpump + Vinfluent

Results:

Using the calculations shown above, the results of the average pump capacity of the pumps are indicated in L/s.

	Trial 1	Trial 2	Trial 3	Average
Pump 1	15190	14.31	10,54	13.55.
Pump 2	11,29	15,06.	13.55.	13.30-

Therefore the pump capacity of Pump 1 is 12.76 L/s and Pump 2 is 11.96 L/s.

Prepared On:	0.0
Prepared By:	VV
Signature:	wh



WASTEWATER COLLE	ECTION	
Title:	Pump Station Drawdown	
Revision #:	2	
Implementation Date:	October 13, 2004	
Review/Update Date:	March 1, 2023	
Approved By:	Tony Drouin	

Pump Station	Drawdown	Record
--------------	----------	--------

Pump	Station:	Wast	nago PS	#1	Date:	Sept 27	/23
	Trial		INFLUENT		age the second second	DRAWDOWN	1
	No.	Initial	Final	Result	Initial	Final	Result
	1	109	108.5	0.5	108.5	117	8.5
Pump 1	2	115	114.5	0.5	114.5	122.5	8.0
	3						
	1	105	104	1.0	103.5	110	10.5
Pump 2	2	111	110.5	0.5	110.5	118.5	8.0
	3						
Comple	eted by:	MWes	+/SSm	ith	Measured in	Inch	es

Pump Station: _____

Date: _____

	Trial		INFLUENT			DRAWDOW	N
	No.	Initial	Final	Result	Initial	Final	Result
	1						
Pump 1	2						
	3						
	1						
Pump 2	2						
	3						

Completed by: _____

Measured in: _____

		ها	UMP ST/	ATION D	RAWDO	DWN CA	<u>LCULATIONS</u>
Washag	0			Areas to be Fi	illed		Volume & Flow Calculations
	I						1 inch = 0.0254 m or 1 m = 39.3701 inches
Main		Diameter .	: 2.4 m (94 in)	Radius:	1.2	E	$V_{pump} = \pi r^2 h$
							where $r = 1/2$ diameter (m)
		Influent	Drawdown				h = m/min
	Trial #	Result (m)	Result (m)	Total (m)	Avg. (m)	Flow (L/s)	$Flow = ## \times 1000 litres/60 sec.$
	-	0.01	0.22	0.23			
Pump 1	2	0.01	0.20	0.22	0.222	16.757	Main W/O
	ო			0.00			$V_{pump} = 1.005$ m ³ /min
	-	0.03	0.17	0.19			Flow = 16.757 L/s
Pump 2	2	0.01	0.20	0.22	0.203	15.321	$V_{pump} = 0.919$ m ³ /min
	e			0.00		•	Flow = 15.321 L/s

MM



Appendix D

Laboratory Analysis Reports

Washago Lagoon Annual Summary Report



Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247

04-May-2023

Date Rec. : 28 April 2023 LR Report: CA15895-APR23

Copy: #2

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						27-Apr-23 09:25
Temperature Upon Receipt [°C]						7.0
Biochemical Oxygen Demand (BOD5) [mg/L]	28-Apr-23	13:32	03-May-23	16:08	25	7
Total Suspended Solids [mg/L]	28-Apr-23	15:25	01-May-23	14:58	25	8
pH [No unit]	01-May-23	08:08	02-May-23	09:32		7.90
Alkalinity [mg/L as CaCO3]	01-May-23	08:08	02-May-23	09:32		101
Phosphorus (total) [mg/L]	28-Apr-23	14:33	30-Apr-23	08:18	1	0.05
Total Kjeldahl Nitrogen [as N mg/L]	28-Apr-23	17:34	30-Apr-23	07:14		4.3
Ammonia+Ammonium (N) [as N mg/L]	28-Apr-23	15:55	29-Apr-23	13:33		2.7

Patti Stark Project Specialist, Environment, Health & Safety

0003322045

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247

10-May-2023

Date Rec.: 05 May 2023 LR Report: CA12298-MAY23

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						04-May-23 11:00
Temperature Upon Receipt [°C]						13.0
Biochemical Oxygen Demand (BOD5) [mg/L]	05-May-23	15:27	10-May-23	13:42	25	< 4
Total Suspended Solids [mg/L]	07-May-23	14:07	08-May-23	14:53	25	2
pH [No unit]	05-May-23	16:07	08-May-23	13:17		7.99
Alkalinity [mg/L as CaCO3]	05-May-23	16:07	08-May-23	13:17		110
Phosphorus (total) [mg/L]	06-May-23	13:43	08-May-23	12:44	1	0.12
Total Kjeldahl Nitrogen [as N mg/L]	09-May-23	06:40	10-May-23	08:34		3.6
Ammonia+Ammonium (N) [as N mg/L]	06-May-23	13:13	08-May-23	10:59		2.8

Patti Stark Project Specialist, Environment, Health & Safety

0003328465

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247

08-May-2023

Date Rec.: 01 May 2023 LR Report: CA14030-MAY23

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						01-May-23 09:30
Temperature Upon Receipt [°C]						7.0
Biochemical Oxygen Demand (BOD5) [mg/L]	02-May-23	16:20	08-May-23	10:41	25	12
Total Suspended Solids [mg/L]	03-May-23	11:04	04-May-23	12:02	25	4
pH [No unit]	02-May-23	07:51	03-May-23	09:47		7.79
Alkalinity [mg/L as CaCO3]	02-May-23	07:51	03-May-23	09:47		105
Phosphorus (total) [mg/L]	02-May-23	16:13	03-May-23	08:46	1	0.06
Total Kjeldahl Nitrogen [as N mg/L]	03-May-23	14:48	04-May-23	12:18		3.8
Ammonia+Ammonium (N) [as N mg/L]	02-May-23	20:30	03-May-23	10:00		2.4

Patti Stark Project Specialist, Environment, Health & Safety

0003325574

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247

24-May-2023

Date Rec.: 12 May 2023 LR Report: CA13469-MAY23

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						11-May-23 09:20
Temperature Upon Receipt [°C]						19.0
Biochemical Oxygen Demand (BOD5) [mg/L]	12-May-23	17:54	17-May-23	14:22	25	< 4
Total Suspended Solids [mg/L]	18-May-23	08:33	19-May-23	09:50	25	2
pH [No unit]	15-May-23	06:17	15-May-23	13:44		7.65
Alkalinity [mg/L as CaCO3]	15-May-23	06:17	15-May-23	13:44		105
Phosphorus (total) [mg/L]	16-May-23	08:17	17-May-23	09:26	1	0.19
Total Kjeldahl Nitrogen [as N mg/L]	16-May-23	08:17	17-May-23	09:36		5.2
Ammonia+Ammonium (N) [as N mg/L]	15-May-23	19:27	16-May-23	14:33		3.3

Patti Stark Project Specialist, Environment, Health & Safety

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247

06-June-2023

Date Rec.: 30 May 2023 LR Report: CA19745-MAY23

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1:	2:	3:	4:	5:	6:	7:	8:
	Analysis	Analysis	Analysis	Analysis	Client	Lagoon Effluent	Green River	Green River
	Start Date	Start Time	Completed	Completed	Limits		Upstream	Downstream
			Date	Time				
Sample Date & Time						29-May-23 09:03	29-May-23 09:15	29-May-23 09:23
Temperature Upon Receipt [°C]						14.0	14.0	14.0
Biochemical Oxygen Demand (BOD5) [mg/L]	30-May-23	16:15	05-Jun-23	11:14	25	< 4	< 4	5
Total Suspended Solids [mg/L]	01-Jun-23	08:47	02-Jun-23	10:28	25	2	2	2
Phosphorus (total) [mg/L]	30-May-23	15:28	31-May-23	10:16	1	0.33	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	30-May-23	16:04	01-Jun-23	10:05		4.4	< 0.5	< 0.5
Alkalinity [mg/L as CaCO3]	31-May-23	07:58	02-Jun-23	10:12		109	92	< 2
Ammonia+Ammonium (N) [as N mg/L]	30-May-23	20:11	31-May-23	10:46		3.4	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	30-May-23	20:11	02-Jun-23	10:29		0.074	<0.003	< 0.001
pH [No unit]	31-May-23	07:58	02-Jun-23	10:12		7.75	8.13	5.99
Temperature @ pH [°C]	31-May-23	07:58	02-Jun-23	10:12		19.8	18.9	18.2

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

Jack

Patti Stark Project Specialist, Environment, Health & Safety

000335669

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247 12-June-2023

 Date Rec. :
 01 June 2023

 LR Report:
 CA12037-JUN23

Copy:

#1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Lagoon Effluent	7: Green River Upstream	8: Green River Downstream
Sample Date & Time						31-May-23 11:35	31-May-23 11:20	31-May-23 11:10
Temperature Upon Receipt [°C]						15.0	15.0	15.0
Field pH [no unit]						7.5	8.6	8.7
Field Temperature [celcius]						22	21	21
Biochemical Oxygen Demand (BOD5) [mg/L]	02-Jun-23	17:34	07-Jun-23	13:39	25	5	< 4	< 4
Total Suspended Solids [mg/L]	03-Jun-23	11:29	05-Jun-23	14:49	25	14	2	2
Phosphorus (total) [mg/L]	02-Jun-23	14:39	05-Jun-23	10:20	1	0.36	0.04	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	01-Jun-23	16:49	05-Jun-23	11:50		4.7	< 0.5	< 0.5
Alkalinity [mg/L as CaCO3]	01-Jun-23	16:31	07-Jun-23	09:10		121	94	96
Ammonia+Ammonium (N) [as N mg/L]	02-Jun-23	13:08	05-Jun-23	08:26		3.3	0.1	< 0.1
Unionized Ammonia [mg/L as N]	02-Jun-23	13:08	05-Jun-23	08:27		0.048	0.015	0.016

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

0003362990

Page 1 of 2

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.



LR Report : CA12037-JUN23

Jack

Patti Stark Project Specialist, Environment, Health & Safety

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell) Fax:705-325-1247 16-June-2023

 Date Rec. :
 07 June 2023

 LR Report:
 CA13186-JUN23

Copy:

#1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analvsis	2: Analysis Star	3: t Analysis	4: Analysis	5: Client	6: Lagoon Effluent	7: Green River	8: Green River
	Start Date	Time	Completed Date	Completed Time	Limits		Upstream	Downstream
Sample Date & Time						02-Jun-23 13:53	02-Jun-23 14:05	02-Jun-23 13:35
Temperature Upon Receipt [°C]						12.0	12.0	12.0
Field pH [no unit]						7.3	8.8	8.6
Field Temperature [celcius]						27	24	23.5
Biochemical Oxygen Demand (BOD5) [mg/L]	08-Jun-23	15:40	13-Jun-23	12:35	25	< 4	6	< 4
Total Suspended Solids [mg/L]	07-Jun-23	18:17	08-Jun-23	16:10	25	4	2	2
Alkalinity [mg/L as CaCO3]	08-Jun-23	08:46	12-Jun-23	12:15		112	90	90
Phosphorus (total) [mg/L]	08-Jun-23	14:41	12-Jun-23	13:15	1	0.39	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	07-Jun-23	19:20	12-Jun-23	11:29		4.3	< 0.5	1.3
Ammonia+Ammonium (N) [as N mg/L]	09-Jun-23	16:58	12-Jun-23	10:08		3.3	< 0.1	0.1
Unionized Ammonia [mg/L as N]	09-Jun-23	16:58	12-Jun-23	10:08		0.042	0.018	0.017

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

0003368920

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Twp of Severn (Washago STP)

Attn : Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

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14-November-2023

Date Rec.: 06 November 2023 LR Report: CA13221-NOV23

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CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						06-Nov-23 10:50
Temperature Upon Receipt [°C]						13.5
Biochemical Oxygen Demand (BOD5) [mg/L]	08-Nov-23	16:44	13-Nov-23	14:50	25	17
Total Suspended Solids [mg/L]	10-Nov-23	13:55	13-Nov-23	13:41	25	16
pH [No unit]	08-Nov-23	08:40	09-Nov-23	10:25		8.13
Alkalinity [mg/L as CaCO3]	08-Nov-23	08:40	09-Nov-23	10:25		115
Phosphorus (total) [mg/L]	10-Nov-23	14:29	13-Nov-23	12:56	1	0.09
Total Kjeldahl Nitrogen [as N mg/L]	09-Nov-23	16:09	13-Nov-23	10:48		1.9
Ammonia+Ammonium (N) [as N mg/L]	09-Nov-23	19:53	10-Nov-23	13:01		< 0.1

Jack

Patti Stark Project Specialist, Environment, Health & Safety

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Twp of Severn (Washago STP)

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22-November-2023

 Date Rec. :
 13 November 2023

 LR Report:
 CA14440-NOV23

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CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						13-Nov-23 08:45
Temperature Upon Receipt [°C]						9.0
Biochemical Oxygen Demand (BOD5) [mg/L]	14-Nov-23	16:52	20-Nov-23	12:22	25	20
Total Suspended Solids [mg/L]	16-Nov-23	15:16	17-Nov-23	11:18	25	17
pH [No unit]	14-Nov-23	16:42	15-Nov-23	10:44		8.06
Alkalinity [mg/L as CaCO3]	14-Nov-23	16:42	15-Nov-23	10:44		113
Phosphorus (total) [mg/L]	15-Nov-23	16:54	16-Nov-23	14:16	1	0.08
Total Kjeldahl Nitrogen [as N mg/L]	16-Nov-23	17:05	20-Nov-23	13:47		1.4
Ammonia+Ammonium (N) [as N mg/L]	15-Nov-23	19:40	16-Nov-23	11:37		< 0.1

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Patti Stark Project Specialist, Environment, Health & Safety

0003540789

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Twp of Severn (Washago STP)

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27-November-2023

Date Rec.: 20 November 2023 LR Report: CA14608-NOV23

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CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Washago Lagoon
Sample Date & Time						20-Nov-23 07:59
Temperature Upon Receipt [°C]						9.0
Biochemical Oxygen Demand (BOD5) [mg/L]	21-Nov-23	15:56	27-Nov-23	10:48	25	16
Total Suspended Solids [mg/L]	21-Nov-23	15:05	22-Nov-23	11:49	25	6
pH [No unit]	21-Nov-23	16:07	23-Nov-23	13:30		8.10
Alkalinity [mg/L as CaCO3]	21-Nov-23	16:07	23-Nov-23	13:30		113
Phosphorus (total) [mg/L]	21-Nov-23	16:36	22-Nov-23	14:56	1	0.04
Total Kjeldahl Nitrogen [as N mg/L]	21-Nov-23	15:51	23-Nov-23	11:56		1.6
Ammonia+Ammonium (N) [as N mg/L]	22-Nov-23	17:18	23-Nov-23	11:30		0.4

Jack

Patti Stark Project Specialist, Environment, Health & Safety

0003546710

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Twp of Severn (Washago STP)

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15-December-2023

Date Rec.: 08 December 2023 LR Report: CA12212-DEC23

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CERTIFICATE OF ANALYSIS **Final Report**

Analysis	1:	2:	3:	4:	5:	6:	7:	8:
	Analysis	Analysis	Analysis	Analysis	Client	Lagoon Effluent	Green River	Green River
	Start Date	Start Time	Completed	Completed	Limits		Upstream	Downstream
			Date	Time				
Sample Date & Time						07-Dec-23 09:55	07-Dec-23 10:35	07-Dec-23 09:40
Temperature Upon Receipt [°C]						9.0	9.0	9.0
Field pH [no unit]						7.6	7.7	8.0
Field Temperature [celcius]						7	7	7
Biochemical Oxygen Demand (BOD5) [mg/L]	08-Dec-23	15:49	13-Dec-23	13:16	25	19	< 4	< 4
Total Suspended Solids [mg/L]	12-Dec-23	08:25	12-Dec-23	16:13	25	16	< 2	2
Phosphorus (total) [mg/L]	12-Dec-23	16:09	13-Dec-23	09:39	1	0.04	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	11-Dec-23	16:49	12-Dec-23	10:26		2.1	< 0.5	< 0.5
Alkalinity [mg/L as CaCO3]	09-Dec-23	08:51	11-Dec-23	10:25		107	101	104
Ammonia+Ammonium (N) [as N mg/L]	12-Dec-23	18:14	14-Dec-23	09:58		0.5	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	12-Dec-23	18:14	14-Dec-23	09:58		0.003	< 0.001	< 0.001

Note: Unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

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Kimberley Didsbury Project Specialist, Environment, Health & Safety

000356516

Page 1 of 1

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Phone: 705-345-1841 (cell) Fax:705-325-1247

18-December-2023

 Date Rec. :
 04 December 2023

 LR Report:
 CA14053-DEC23

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#2

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis	2: Analysis Star	3: t Analysis	4: Analysis	5: Client	6: Lagoon Effluent	7: Green River	8: Green River
	Start Date	Time	Completed Date	Time	Limits		Upstream	Downstream
Sample Date & Time						04-Dec-23 10:55	04-Dec-23 07:07	04-Dec-23 07:15
Temperature Upon Receipt [°C]						5.0	5.0	5.0
Field pH [no unit]						7.70	7.35	6.90
Field Temperature [celcius]						4	7.0	7.1
Biochemical Oxygen Demand (BOD5) [mg/L]	05-Dec-23	15:56	18-Dec-23	12:42	25	32	< 4	< 4
Total Suspended Solids [mg/L]	05-Dec-23	12:42	06-Dec-23	15:25	25	28	< 2	< 2
Alkalinity [mg/L as CaCO3]	06-Dec-23	08:37	07-Dec-23	12:05		103	105	103
Phosphorus (total) [mg/L]	05-Dec-23	17:06	06-Dec-23	11:40	1	0.05	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	05-Dec-23	19:45	06-Dec-23	13:05		2.1	< 0.5	< 0.5
Ammonia+Ammonium (N) [as N mg/L]	05-Dec-23	18:22	06-Dec-23	10:07		< 0.1	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	05-Dec-23	18:22	06-Dec-23	10:07		< 0.001	< 0.001	< 0.001

0003567331

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Patti Stark Project Specialist, Environment, Health & Safety

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Twp of Severn (Washago STP)

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Phone: 705-345-1841 (cell) Fax:705-325-1247

18-December-2023

Date Rec. :11 December 2023LR Report:CA14340-DEC23

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits	6: Lagoon Effluent	7: Green River Upstream	8: Green River Downstream
Sample Date & Time						11-Dec-23 11:30	11-Dec-23 11:10	11-Dec-23 11:20
Temperature Upon Receipt [°C]						6.0	6.0	6.0
Field pH [no unit]						8.06	7.90	8.00
Field Temperature [celcius]						4	6	6
Biochemical Oxygen Demand (BOD5) [mg/L]	12-Dec-23	16:25	18-Dec-23	11:41	25	27	< 4	< 4
Total Suspended Solids [mg/L]	13-Dec-23	10:08	14-Dec-23	15:59	25	19	2	2
Alkalinity [mg/L as CaCO3]	12-Dec-23	13:51	13-Dec-23	12:25		103	102	103
Phosphorus (total) [mg/L]	12-Dec-23	16:09	13-Dec-23	09:55	1	0.04	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	12-Dec-23	18:24	14-Dec-23	09:37		2.1	< 0.5	< 0.5
Ammonia+Ammonium (N) [as N mg/L]	12-Dec-23	18:14	14-Dec-23	10:10		0.8	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	12-Dec-23	18:14	14-Dec-23	10:10		0.010	< 0.001	0.001

0003567864

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